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DOCUMENTATION OF THE MODELING OF POTENTIAL VEGETATION AT THREE SPATIAL SCALES USING BIOPHYSICAL SETTINGS IN THE COLUMBIA RIVER BASIN ASSESSMENT AREA

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Preface

The following report was prepared by University scientists through cooperative agreement, project science staff, or contractors as part of the ongoing efforts of the Interior Columbia Basin Ecosystem Management Project, co-managed by the U.S. Forest Service and the Bureau of Land Management. It was prepared for the express purpose of compiling information, reviewing available literature, researching topics related to ecosystems within the Interior Columbia Basin, or exploring relationships among biophysical and economic/social resources.

This report has been reviewed by agency scientists as part of the ongoing ecosystem project. The report may be cited within the primary products produced by the project or it may have served its purposes by furthering our understanding of complex resource issues within the Basin. This report may become the basis for scientific journal articles or technical reports by the USDA Forest Service or USDI Bureau of Land Management. The attached report has not been through all the steps appropriate to final publishing as either a scientific journal article or a technical report.

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ABSTRACT

This report describes the application of a vegetation model to predict potential vegetation over the 822,922 km^2 of the Columbia River Basin (CRB) assessment area at 3 scales. Topographic relief in the CRB assessment area ranges from 23 m (75 ft) to 4203 m (13,785 ft), with vegetation types that include desert grasslands in low elevation valleys and basins and alpine communities on some of the high peaks. A regional hierarchical classification of the Western U.S. vegetation (Bourgeron and Engelking, 1994) was used to derive potential vegetation (PV) type classes along moisture and temperature gradients at three distinct scales (section, regional and coarse). Elevation, slope and aspect settings were assigned to the PV classes at the section level. These settings were used to assign each 1 km x 1 km DEM pixel to the most probable PV class. GIS technology was used to aggregate these section level mapping units into the regional level map and the coarse level map. All maps were reviewed for their general approximation of PV cover over the CRB assessment area.

INTRODUCTION

Potential vegetation (PV) has been characterized and mapped worldwide for a long time. A review of major international approaches, including techniques and methodologies to produce such maps, is provided in Kuchler and Zonneveld (1988). Contemporary computer technology (e.g., GIS, data handling and storage) led to production of maps of vegetation using environmental models (Twery et al., 1991). Such work has been conducted in Australia (Kessel, 1990), California (Walker et al., 1995), and Switzerland (Brzeziecki et al., 1993). The generation and use of PV maps is scale dependent. Although the specific definitions may change, PV is always understood as an expression of the biophysical environment at a site regardless of the study scale (Ellenberg, 1988; Kuchler, 1988).

PV maps are used in conjunction with maps of abiotic features (e.g., landforms) to define biophysical environments at different scales (Zonneveld, 1988a). PV and biophysical environment maps have been widely used over the world in forestry, agriculture, range management, landscape design and land-use planning (Zonneveld, 1979, 1988b, 1989). These maps are needed for setting the ecological context in the characterization of environmental and disturbance regimes in order to assess present conditions of landscape patterns and as input into models of landscape pattern changes under various scenarios (management, global change, etc.).

This documentation summarizes the approach used to model the distribution of PV over the Columbia River Basin (CRB) assessment area. Three scales were selected (section, regional and coarse levels) that correspond to the levels of ecological organization considered by the CRB assessment team (Science Integration Team, EEMP, 1994). A regional classification of the vegetation of the Western

U.S. (Bourgeron and Engelking, 1994) was adopted as the basis for the PV mapping. Vegetation relations to broad moisture and temperature settings were produced in the form of 4 x 4 matrices for the vegetation of interest at each study scale. These matrices at the finest scale (section) provided the basis for assigning elevation, slope and aspect settings. Hypothesized PV classes were encoded based on settings derived from information in a digital elevation model (DEM) of each section. Mapping units were aggregated from the lower to the next higher scale using the appropriate environmental matrices.

STUDY AREA

The area covered by the PV maps includes all of the CRB assessment area (822,922 km2) as defined for the Eastside Ecosystem Management Project (EEMP) (Figure 1). The landscape characterization boundary map produced by Menakis and Long (August 26, 1994) was used to delineate the area where PV was modeled. Topographic relief ranges from 23 m (75 ft) to 4203 m (13,785 ft), with vegetation types that include desert grasslands in low elevation valleys and basins and alpine communities on the high peaks. Vegetation in low to mid elevations has a complex history and has been intensively managed, including widespread conversion to agricultural and urban uses in some areas. Higher elevation zones have a somewhat more natural vegetation pattern.

The climate varies from hot and very dry in the low elevation valleys to temperate humid, with a strong maritime to continental gradient from west to east, as well as steep elevational gradients in the mountain ranges. The system used in this study to define ecological regions in the CRB assessment area is the National Hierarchical Framework of Ecological Units (ECOMAP, 1993). Bailey's (1980) descriptions of the units of an initial hierarchical classification of ecoregions of the United States is being revised (Bailey, in prep). In the CRB assessment area, the section level was chosen as the basis for the PV modeling. The CRB encompasses 24 sections. Section maps (Bailey et al., 1994) and descriptions (McNab and Avers, 1994) were used. For the purpose of the PV modeling, one of the sections (342B - Northwestern Basin and Range) was split into two components because of its very large surface area and an enormous biophysical gradient encompassed by the section.

SCALE AND RESOLUTION

A raster map generated using a GIS is an array of square cells representing sampling points where the occurrence of vegetation types is modelled. Any vegetation-site model can be used to generate maps at different scales. The scale determines the grid size and/or the level of classification used and can change the characteristics of the grid cells on the map. In the CRB study, the mapping scale is 1:2,000,00 and 3 classification scales were used to produce grid cells. These three classification scales (section, regional and coarse [see details in the following sections of the text]) correspond to three levels of ecological organization for the assessment (Science Integration Team, EEMP, 1994).

For the generation of the maps themselves, resolution is more important than scale. Resolution is the distance between sampling points and, hence, directly determines the number of predicted points in the map area. In the present work, a resolution of 1x1 km has been chosen.

Data source: The classification system used to generate PV classes

The dependent variable in the vegetation site model is a vegetation type. Over large areas like the CRB, there is a need to use a standardized and regionalized classification system (Bourgeron, 1988, 1989). In this modeling exercise, The Nature Conservancy's western regional vegetation classification (Bourgeron and Engelking, 1994) was adopted. The effort to produce a standardized western U.S. vegetation classification was spearheaded by The Nature Conservancy in collaboration with the State Heritage Program network and cooperators (e.g., USFS, BLM, etc.). A first comprehensive draft of the western regional vegetation classification (WRVC) was completed in March 1994 (Bourgeron and Engelking, 1994).

This classification includes the existing natural and the semi-natural vegetation found in the western U.S. Incorporated in the classification are vegetation types with modest amounts of exotic species that are deemed to be within the reasonable range of the original natural vegetation. Excluded from the classification are vegetation types that are entirely created by human activities (e.g., lawns, crops). Types that are dominated by exotic species are not in the main body of the classification but are documented in an appendix for various purposes (mapping and management). This appendix was available for use in the CRB assessment project.

The WRVC is a hierarchical classification system patterned at the highest levels after the UNESCO world vegetation system (UNESCO, 1973) as revised by Driscoll et al. (1984) in the U.S. ecological land classification framework. Under the UNESCO framework, subdivisions based on floristic units have been added in the western regional classification. The hierarchical classification system is as follows:

- CLASSES: There are five mutually exclusive classes based on dominant growth form and cover: Forest, Woodland, Shrubland, Dwarf-shrubland, and Herbaceous vegetation.

- SUBCLASSES: Discrimination is based on morphologic characters as adaptations to water and temperature regimes.

- GROUPS: The separations are based on further morphologic adaptations to generalized climatic regimes, associated life forms, and other physiognomic characteristics.

- FORMATIONS: Criteria for communities at this level include tree crown shape, kinds of associated vegetation, amount and kind of understory vegetation, and a variety of morphologic adaptations to ecological and environmental features.

- ALLIANCES: The alliance level is similar to the series level used in the western U.S. (Pfister et al., 1977; Mueggler and Stewart, 1980), but includes existing types, not just climax or natural vegetation types. Alliances are recognized by at least one differential or dominant differential species (sensu Pojar et al., 1987).

- PLANT ASSOCIATIONS: The plant association concept (Flahault and Schroter, 1910) has been used with a few variations by most schools of vegetation classification (Braun-Blanquet, 1965; Westhoff and van der Maarel, 1978; see review in Whittaker, 1980). The habitat typing methodology also uses the plant association concept but restricts its use to climax or late seral vegetation (Daubenmire, 1952; Pfister, 1977). There are approximately 2010 plant associations in the western regional classification (Bourgeron and Engelking, 1994).

The classification was developed by sorting stand data available over the western U.S. in journal articles, published and unpublished reports, inventory data, etc. To be included, a reference had to provide: (1) location information, (2) description of methods, and (3) species lists and measures of abundance values. A total of 1346 references have been used to date. The classification process was implemented through a variety of qualitative and quantitative means (stand table comparison, rearrangement, clustering, ordination, correlations of types with each others, etc.) depending upon the amount and type of information available.

The Nature Conservancy state and regional Heritage ecologists worked together to ensure: (1) the consistent regional application of the techniques and concepts; (2) the quality control of the data; and (3) the internal consistency of the regional classification. Existing state classifications were merged into the regional framework. A series of regional and subregional meetings have been held over the past ten years to interpret the results of the analyses and to consolidate the regional classification. Many academic and agency professionals were directly involved in the various steps of the process and in some meetings. State and regional reviews were provided by local and regional experts.

At present, the western regional classification of the vegetation covers Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington and Wyoming. Work was conducted in the spring of 1994 to begin inclusion of California within the regional framework. Although the system has some limitations (incompleteness due to the lack of data, need for more quantitative analysis, etc.), it is the only regional attempt of the sort that has been developed using existing information. It is used by The Nature Conservancy for conservation planning in the western region and by the National Biological Service's GAP to map existing vegetation at the alliance level.

Potential vegetation classifications and their temperature-moisture gradient relations

PV classifications were generated at each of the three classification scales. First, the vegetation was divided in three broad physiognomic classes: forests, shrublands and herbaceous types. Forests include the closed and open forests of the Driscoll et al.'s (1984) classification framework. Shrublands include Driscoll et al.'s shrublands and dwarf shrublands. Herbaceous types are the same as in Driscoll et al.'s framework. Second, potential vegetation types and their relationships to temperature-moisture gradients were defined for each physiognomic class, (1) for each section (section level) and (2) across the entire CRB assessment area (regional level). A coarse level PV classification was generated by defining twenty PV types in relation to basin wide temperature-moisture gradients, regardless of the physiognomy.

There is a large body of information (literature and available data) that allows for the display of relationships between plant vegetation types and their environment at the landscape level. Such relationships are often presented as ecological gradient graphs which greatly facilitate the mapping of the PV. Such schemes however are generally local and cannot be easily regionalized. Furthermore, they usually do not follow an explicit and formalized process, which leads to a low degree of reproducibility.

Because (1) a regional numerical database was not available to develop statistical vegetation-site models at the inception of the project, and (2) constraints due to the assessment timetable would not have allowed for such a rigorous statistical approach, the present work followed a hybrid methodology. Expert knowledge and experience were incorporated by the participation of professionals who have broad knowledge of one or more of the vegetation classes within an array of the sections. A series of workshops were organized, and the participants asked to contribute their knowledge and experience (a list of participants is provided at the end of this document). The statement of the vegetation-environment relations was made explicit and repeatable by the use of a standardized PV classification system at the plant association level and of all environmental site data for generating environmental matrices at all the study scales. Finally, the use of a DEM to encode the biophysical settings for each PV class led to the verification of the hypothesized model.

The process of determining the potential vegetation classifications and their temperature-moisture gradient relations included the following steps.

(1) Generation of a list of PV plant associations over the CRB

A list of plant associations corresponding to potential vegetation by physiognomic class was generated from the WRVC over the CRB (Appendices 1 & 2). By definition, any PV is hypothetical (Ellenberg, 1988; Kuchler, 1988). Remnants of natural or semi-natural vegetation still occurring in the present day landscape are often used to assess what PV may be in a given location (e.g., Brzeziecki et al., 1993; Ellenberg, 1988; Kuchler, 1988).

In the CRB, the general approach was to consider as PV all plant associations that represent the end of successional sequences. The WRVC was searched for such types and a list was produced. All existing information (e.g., literature, data, etc.) was used to make decisions. For example, generalized successional models developed for forest succession after fires were considered to assess the seral status of many forest types (e.g., Fisher and Clayton, 1983). The list of candidate plant associations to be used as the foundations for mapping PV in the CRB area was reviewed by State Heritage ecologists and agency professionals.

The master list of potential plant associations was revised as necessary (types were deleted, or added if missing) before, during, and after all the workshops organized to build the PV classifications, to assign the biophysical settings and to conduct quality control of the maps produced. To be added to the revised list, types had to be (1) in the WRVC but omitted in the initial list, or (2) fully documented (i.e., supported by hard data, and having been subjected to analysis and peer review) but not incorporated in the WRVC. Preliminary types that had not been published by spring 1994 were not included, but were added to an appendix for future update.

After the different rounds of reviews, a total number of 807 plant associations were considered for the PV mapping and 528 references were used to characterize these types and their environmental relationships (Appendix 1). Additional information on those plant associations with restricted distribution (G1-G2) is provided in Appendix 2.

(2) Arrangement of the potential associations into section level classifications

A workshop was organized in Portland, OR, to build section level potential vegetation classifications for each of the three broad physiognomic classes of vegetation (forests, shrublands and herbaceous types) from the master list of PV plant associations. A map of sections and their descriptions were provided by the EEMP. USFS, USFWS, BLM, SCS, and other professionals with broad regional knowledge of the vegetation participated in the process.

For each physiognomic class within each section, the moisture and temperature gradients were divided into four coarse segments resulting in 4 x 4 matrices (four temperature settings x four moisture settings). Workshop participants were asked to list the PV plant associations found within each temperature-moisture setting (e.g., [cold, wet] setting). Table 1 presents an example for the Northern Rockies section. All available data (published and unpublished field data, quantitative descriptions, environmental and site factors) were used to group plant associations within the moisture-temperature categories.

The temperature and moisture gradients were scaled by physiognomic class within each section. For example, within a given section the [cold, wet] cell for forests is not necessarily equivalent to the [cold, wet] cell for the shrublands. Moreover, a given temperature-moisture cell (e.g., [cold,wet] for forests) is not necessarily equivalent among sections (e.g., between a high mountain section and a low desert section). The temperature-moisture matrices for each physiognomic class for all sections are listed in Appendix 3.

(3) Generation of the regional and coarse level classifications

Section level classifications were aggregated into a regional classification using regional temperature-moisture 4 x 4 matrices for each physiognomic class during a subsequent workshop. This process created three regional PV classifications, one for each physiognomic class (Tables 2 and 3). All plant associations found in each regional class are listed in Appendix 4. Descriptions of the regional vegetation types are listed in Appendix 5.

During the same workshop, a coarse level temperature-moisture matrix of twenty cells was created. The regional PV classes were aggregated into the cells of this matrix, regardless of the physiognomic class (Table 4). A list of these coarse level types and names is available in Table 5 and full descriptions are in Appendix 6. Appendix 7 shows the placement of section PV classes into the coarse temperature-moisture matrix.

Assignment of elevational, slope and aspect settings to the section level matrices

The independent variables for the model were selected on the basis of their ability to be derived from the DEM data for each 1x1 km pixel of the grid covering the entire CRB. Elevation, slope and aspect (Table 6) are indirect ecological factors that were chosen since they are closely related to direct ecological factors such as solar radiation. The assignment of the biophysical settings to section level PV classes (model calibration) was done on a subsection basis.

The subsection level is the most appropriate level when using indirect factors because it is at that spatial scale that indirect factors are best related to direct variables (such as site energy regimes, runoff potential, available moisture, and seasonal temperature highs and lows) that drive vegetation patterns at the level of the plant association, or functional groups of plant associations.

A total of 5 subregional workshops were organized in Boise (1), Missoula (2), Portland (1) and Reno (1). Professionals with local (section, subsection) field experience (e.g., national forest ecologists, range conservationists, etc.) were asked to assign one of four slope settings, one of three aspect classes, and a 152.5 m (500 ft) elevation interval for the section level PV classes within each subsection.

Maps of subsections were provided by the EEMP. Work subgroups were formed based on participants' expertise and knowledge. All available information (literature, data, etc.) was provided as well. Participants in the workshop that led to the generation of the section level PV classifications attended these subregional meetings to provide assistance and explanation with respect to any aspect of the section level classifications and temperature-moisture gradients. Any necessary change to section level classifications was made at the time based on documented information.

USE OF THE DEM

A digital elevation model (DEM) provided information on elevation, slope and aspect for each 1 x 1 km pixel over the CRB assessment area. The most accurately measured variable was elevation. Aspect and slope were derived from elevation. Their accuracy depends upon the resolution of the elevation data and on the algorithm used to calculate them.

Section level PV mapping was accomplished within each subsection by reading the slope, aspect and elevation values for each pixel and using them to index the name of the section level PV vegetation type in the pixel. Inaccuracy in the DEM was corrected during a series of work sessions for quality control of the maps at the three scales.

RESULTS

Model calibration and section level simulated vegetation map

A map was produced for each section using the section level PV classifications and their assigned elevation/aspect/slope settings by subsections (Figure 2). Maps were reviewed by the state Heritage ecologists and agency professionals. Overlaps and blank areas in the maps were corrected. When more than one PV type occurred in one pixel, the dominant class was chosen. Blanks were filled in by writing PV rules or by using the rockland category whenever appropriate. Obvious errors, such as predicted forests in areas covered by shrublands, were also corrected using available information (existing maps, location specific data). Changes in the vegetation-site condition models and the classifications were made as necessary and subjected to review.

The calibration of the vegetation-site models was therefore carried out separately for each PV class by elevation belt within each subsection. Once the vegetation-site models were revised, resulting attribute matrices were generated section by section to describe the possible ecological range of each section level PV class. Table 7 provides an example of an attribute matrix for the Northern Rockies section. A final map of all sections in the CRB assessment area was produced at the 1:2,000,000 scale (Figure 3). Appendix 8 lists the final attribute matrices for all sections used for generating the map.

Regional and coarse level maps

The regional map (Figure 4) was produced from the section level maps by encoding the relation between section level classes and regional classes (Table 3). The coarse level map (Figure 5) was produced by encoding the relation between the regional classes and the coarse level classes (Table 4). All maps were reviewed. Overlaps, blanks and obvious errors in the maps were corrected using the same rules as for the section level PV map. Changes needed in the PV classifications at any of the three scales as well as in the biophysical settings as a consequence of these corrections were made. Classification and model calibration tables and appendices reflect all changes.

Simulated vegetation patterns

The maps were analyzed to show general patterns between vegetation and elevation at different scales. Area statistics for the maps are given for:

(1) Frequency and relative percentage of main elevational belts by individual section. Table 8 is an example for the Northern Rockies section. Appendix 9 lists all sections.

(2) Frequency and relative percentage of PV classes by individual section. Table 9 is an example for the Northern Rockies section. Appendix 10 lists all sections.

(3) Frequency and relative percentage of regional PV classes (Table 10).

(4) Frequency and relative percentage of coarse PV classes (Table 11).

Model performance and map evaluation

To evaluate the performance of the vegetation site model and the quality of the simulated vegetation maps, quantitative comparisons were made between the simulated maps and field data that were collected on plots in an area included in the CRB. Field data exist that include the determination of PV for the study plot (Jensen et al., 1994). The Northern Rockies section was chosen as a test area for model performance and map evaluation because of the large number of plots that it contains and confidence in the PV assignment by field investigators.

There are several limitations to the quantitative comparison of the maps and of the plot level information:

(1) The PV name used in the plot is not the same as in the maps. This category includes four distinct cases:

(1.1.) Higher level of classification: for example the plot name is at the series level (above the plant association) that does not allow for assignment within one of the PV classes used to generate the maps. For instance, some plots indicate that the PV is Abies lasiocarpa series, information that cannot be incorporated within one of the section level classes.

(1.2.) Lower level of classification: some plots indicate local variations of plant associations (e.g., phases) in a way that precludes aggregation into a PV class.

(1.3.) Synonymy problems: classes are the same but the names are different. Some known problems were fixed but others may remain.

(1.4.) Different classifications: for example, some plots indicate that the PV is alpine rangeland, with no species specified.

(2) The scale of the plots is much finer than the scale of the maps. Therefore, the plot might support a PV class that is either not listed in the section list (not mappable) or, if listed, might be an inclusion within the predicted mapping unit. In both cases, there is a scale dependent discrepancy between the plot level PV and the simulated map PV. This is probably the most serious problem that cannot be remedied.

(3) The ecological coverage is not even for all physiognomic classes. Forests have the most plots, followed by the shrublands and then the herbaceous types. This unevenness leads to a bias in the quantification of the model evaluation.

The database was screened for content and confidence in the PV assignment. Plots with any of the problems listed above and/or low confidence level were omitted. A total of 2545 plots were available for the performance evaluation. Even with the limitations listed above, the comparison maps/plot database is appropriate because (1) the vegetation classification used in the plot database is basically the same as that used in the models, and (2) it is the only way to have any idea of the performance of the models and of the maps.

Correspondence between maps and plots was quantified. Map performance is based on percentages of plots in which predicted map class and observed class were identical. Tables 12a, b, and c show the degree of correspondence for all vegetation types found in the Northern Rockies section for the three simulated maps (section, regional and coarse). On average correspondence is 29% at the section classification level, 32% at the regional classification level, and 31% at the coarse classification level.

The comparisons were broadened to include adjacent classes. Adjacent classes are those within plus or minus one temperature or moisture class of the target class. For example, at the section level, the total number of locations with observed class F23 was compared with the total number of locations whose predicted class was F23 plus a weighted average of predicted classes F13, F22, F24, and F33. The new degree of correspondence includes the chance of making an error of one class. For forest classes at the section level, from 7 to 61% of observed classes are correctly predicted, with an average of 45% correct (Table 13a). The degree of correspondence is 46% at the regional level (Table 13b), and 43% at the coarse level (Table 13c).

Since field identification of PV on plots is intended to be accurate within plus or minus one PV category, predicted map classes were evaluated using both identical and adjacent observed classes. The percentage of mapped classes falling within plus or minus one observed class ranged from 8 to 84% at the section level. Similar ranges occurred at the regional and coarse levels. Tables 13a, b, and c show the correspondence when an error of one class is allowed.

The numbers are encouraging because, as a consequence of the limitations listed earlier, the quantified degree of correspondence between the maps and the plot database are expected to be much lower than between simulated maps and current methods of accuracy assessment.

CONCLUSIONS

This report presents the basis for constructing vegetation models from vegetation-site information and for generating vegetation maps over large areas. The work emphasized the following areas:

(1) The accuracy of the source classification of the vegetation (data driven) and the derivation of the PV plant associations.

(2) The accuracy of the vegetation-site model, including the accuracy of the gradient relations of the vegetation and of the PV classifications at the three study scales.

(4) The correction of errors associated with the DEM.

The models are correct on average close to half of the time when an error of one class is allowed, which is similar to results in Switzerland (Brzeziecki et al., 1993) and in California (Walker et al., 1995). Such models are of strong interest because (1) they can be modified easily to conform to new information, and (2) they can be used to derive relationships between vegetation and driving (direct) variables through the use of simple process models.

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MOISTURE:

TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4	ABLA/MEFE	ABLA/LUGLH LALY/ABLA	ABLA/VASC ABLA-PIAL/VASC PIAL-ABLA
COOL (2)	PICEA/EQAR ABLA/OPHO THPL/ATFI	ABLA/LIBO3 THPL/GYDR TSME/CLUN2 ABLA/CLUN2 PICEA/GATR3 PICEA/CLUN2	ABLA/VACE PSME/LIBO3 ABGR/XETE ABLA/XETE ABLA/VAGL	PICEA/VACE PSME/VACE
WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE16	THPL/CLUN2 THPL/ASCA2 ABGR/LIBO3 ABGR/CLUN2	PSME/CARU PSME/PHMA5 ABGR/PHMA5 PSME/VAGL	PSME/SYAL
HOT (4)	POTR5/COSE16 POTR15/COSE16 PICEA/LYAM3 PSME/COSE16	POTR5/OSOC		

TABLE 2. Regional level Potential Vegetation classification: List of regional level classes and names.

2a. FOREST

CLASS	**NAME**
F1,1	COLD, WET FORESTS
F1,2	COLD, MOIST FORESTS
F1,3	COLD, DRY FORESTS
F1,4	COLD, VERY DRY FORESTS
F2,1	COOL, WET FORESTS
F2,2	COOL, MOIST FORESTS
F2,3	COOL, DRY FORESTS
F2,4	COOL, VERY DRY FORESTS
F3,1	WARM, WET FORESTS
F3,2	WARM, MOIST FORESTS
F3,3	WARM, DRY FORESTS
F3,4	WARM, VERY DRY FORESTS
F4,1	HOT, WET FORESTS
F4,2	HOT, MOIST FORESTS
F4,3	HOT, DRY FORESTS
F4,4	HOT, VERY DRY FORESTS

2b. SHRUBLAND

CLASS	**NAME**
S1,1	COLD, WET SHRUBLANDS
S1,2	COLD, MOIST SHRUBLANDS
S1,3	COLD, DRY SHRUBLANDS
S1,4	COLD, VERY DRY SHRUBLANDS
S2,1	COOL, WET SHRUBLANDS
S2,2	COOL, MOIST SHRUBLANDS
S2,3	COOL, DRY SHRUBLANDS
S2,4	COOL, VERY DRY SHRUBLANDS
S3,1	WARM, WET SHRUBLANDS
S3,2	WARM, MOIST SHRUBLANDS
S3,3	WARM, DRY SHRUBLANDS
S3,4	WARM, VERY DRY SHRUBLANDS
S4,1	HOT, WET SHRUBLANDS
S4,2	HOT, MOIST SHRUBLANDS
S4,3	HOT, DRY SHRUBLANDS
S4,4	HOT, VERY DRY SHRUBLANDS

2c. HERBACEOUS

CLASS	NAME
H1,1	COLD, WET HERBLANDS
H1,2	COLD, MOIST HERBLANDS
H1,3	COLD, DRY HERBLANDS
H1,4	COLD, VERY DRY HERBLANDS
H2,1	COOL, WET HERBLANDS
H2,2	COOL, MOIST HERBLANDS
H2,3	COOL, DRY HERBLANDS
H2,4	COOL, VERY DRY HERBLANDS
H3,1	WARM, WET HERBLANDS
H3,2	WARM, MOIST HERBLANDS
H3,3	WARM, DRY HERBLANDS
H3,4	WARM, VERY DRY HERBLANDS
H4,1	HOT, WET HERBLANDS
H4,2	HOT, MOIST HERBLANDS
H4,3	HOT, DRY HERBLANDS
H4,4	HOT, VERY DRY HERBLANDS

TABLE 3. Regional level Potential Vegetation classification: Distribution of vegetation types (i.e. groups of plant associations defined at the section level) in the temperature moisture gradient matrices, for each of the biomes.

TABLE 3a. Regional Forest Classes

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
COLD (1)	M242C	1,1	M242C	1,2	342C	1,3	M242C	1,4
	M331A	1,1	M331A	1,2	M242C	1,3	M261D	1,4
	M331D	1,1	M331D	1,2	M261D	1,2	M261G	1,4
	M331J	1,1	M331J	1,2 2,2	M331A	1,3	M331A	1,4 2,4
	M332A	1,1 1,2	M332B	1,3	M331D	1,3	M331D	1,4
	M332B	1,1 1,2	M332C	1,2	M331J	1,3	M331J	1,4
	M332C	1,1	M332D	1,2	M332A	1,4	M332B	1,4
	M332D	1,1	M332E	1,2	M332C	1,3	M332C	1,4
	M332E	1,1	M332G	2,2	M332D	1,3	M332D	1,4
	M332F	1,1	M333A	1,3	M332E	1,3	M332E	1,4
	M332G	1,3	M333D	1,2	M332F	1,2 1,3	M332F	1,4
	M333A	1,1 1,2			M332G	1,4	M333A	1,4
	M333B	1,1 1,2			M333B	1,3	M333B	1,4
	M333C	1,1 1,2			M333C	1,3	M333C	1,4
	M333D	1,1			M333D	1,3	M333D	1,4
COOL (2)	342B-E	1,1	341E	1,2	341E	1,3		
	342C	1,1	342C	1,2 2,1 2,2	342B-E	1,2	M242C	2,4
	M242C	2,1 3,1	M242C	2,2 3,2	342B-W	1,2	M331D	2,4
	M331A	2,1	M261G	2,1	M242C	2,3	M331J	2,4
	M331D	2,1	M331A	2,2	M261D	1,3 2,1 2,2	M332D	2,4
	M331J	2,1 3,1	M331D	2,2	M261G	1,1 1,2 1,3 & 2,2 2,3	M332E	2,3
	M332A	2,1 3,1	M331J	3,2			M333A	2,4
	M332B	2,1 3,1	M332A	2,2 2,3	M331A	2,3 3,2	M333B	2,4
	M332C	2,1 3,1	M332B	2,2 3,2	M331D	2,3		
	M332D	2,1	M332C	2,2	M331J	2,3		
	M332E	2,1	M332D	2,2	M332A	1,3 2,4		
	M332F	2,1	M332E	2,2	M332B	2,3		
	M332G	2,1	M332F	2,2	M332C	2,3		
	M333A	2,1	M332G	2,3	M332D	2,3		
	M333B	2,1 3,1	M333A	2,2 3,1	M332F	2,3		
	M333C	2,1 3,1	M333B	2,2 3,2	M332G	2,4		
	M333D	2,1 3,1	M333C	2,2	M333A	2,3		
			M333D	2,2	M333B	2,3		
					M333C	2,3		
					M333D	2,3		

TABLE 3a. Regional Forest Classes (page 2)

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
WARM (3)	331A	2,1	342B – E	2,2 2,3 3,2	331A	1,2 1,3	342D	3,4
	342B – E	2,1	342B – W	1,1 2,2 2,3 3,2	342B – E	1,3	M242C	3,4
	342B – W	2,1	342C	3,1	342B – W	1,3	M261D	3,3
	342D	2,1	342D	3,2	342C	2,3	M261G	3,3
	342H	1,1	M261D	3,1	342D	2,3	M331D	3,4
	342I	1,1	M261G	3,1	342H	1,2	M331J	3,4
	M331A	3,1	M331D	3,2 4,2	342I	1,2	M332C	4,3
	M331D	3,1	M332A	3,2 3,3	M242C	3,3	M332D	4,3
	M332B	4,1	M332B	2,4 4,2	M261D	2,3 3,2 3,4	M332E	3,4 4,3
	M332C	4,1	M332C	3,2	M261G	3,2	M332F	2,4 4,4
	M332D	3,1	M332D	3,2	M331A	3,3 3,4 4,2 4,3	M333A	3,4
	M332E	3,1	M332E	3,2	M331D	3,3 4,3	M333B	4,4
	M332F	3,1	M332F	3,2	M331J	3,3	M333D	4,4
	M333B	4,1	M333A	3,2	M332A	3,4		
	M333C	4,1	M333B	4,2	M332B	3,3 3,4 4,3		
	M333D	4,1	M333C	3,2 4,2	M332C	2,4 3,3		
			M333D	3,2 4,2	M332D	3,3 3,4		
					M332E	2,4 3,3 4,1 4,2		
					M332F	3,3 3,4		
					M332G	3,2 3,3 3,4		
					M333A	3,3		
					M333B	3,3 3,4 4,3		
					M333C	2,4 3,3 3,4		
					M333D	2,4 3,3 3,4		
HOT (4)	331A	1,1 1,2 3,1 4,1	331A	2,2	331A	3,2	341E	3,3 4,4
	341E	4,1	342C	3,3 3,4	342B – E	3,3	342B–E	3,4 4,4
	342B – E	3,1 4,1	342H	1,3	342B – W	3,3 4,3	342B–W	3,4 4,4
	342B – W	3,1 4,1	M242C	4,2 4,3	342H	2,3	342C	4,3 4,4
	342C	4,1	M261D	4,2	342I	2,3 4,4	342H	3,3 3,4 4,3 4,4
	342H	2,1 3,1 4,1	M261G	4,3	M242C	4,4	M261D	4,4
	342I	3,1 4,1	M333A	4,3 4,4	M261D	4,3	M261G	4,4
	M261D	4,1			M331A	4,4	M331D	4,4
	M332A	4,2			M331J	4,4	M332E	4,4
	M332D	4,1			M332A	4,4		
	M332G	3,1			M332B	4,4		
	M333A	4,1			M332C	3,4 4,4		
					M332D	4,4		
					M332G	4,3 4,4		

TABLE 3b. Regional Shrubland Classes

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
COLD (1)	M242C	1,1	342B – E	1,1	M242C	2,4	M261G	1,4
	M261G	1,1	M242C	1,2	M261D	2,3		
	M331A	1,1	M333A	1,2	M261G	1,2		
	M331J	1,1			M332A	2,3		
	M332A	1,1			M332C	1,3 3,3		
	M332B	1,1			M332D	1,3 3,3		
	M332C	1,1 1,2			M332E	1,2		
	M332D	1,1 1,2			M332F	1,2		
	M332E	1,1						
	M332F	1,1						
	M333A	2,1						
	M333B	1,1 1,2						
	M333C	1,1 1,2						
	M333D	1,1 1,2						
COOL (2)	342B – E	2,1	341E	1,2	341E	1,3	342B – E	2,4
	342B – W	1,1 2,1	342B – E	1,2 2,2	342B – E	1,3 1,4	342D	2,4
	342C	2,1	342B – W	1,3 2,2	342B – W	1,2 1,4	M331A	1,4
	342D	2,1	342C	1,2 2,2	342C	1,1 1,3	M332E	1,4
	M242C	2,1	342D	1,2	342D	2,2	M332F	1,4
	M261D	3,1	342H	1,1 2,2	342I	2,3 2,4		
	M261G	2,1	342I	2,2	M242C	1,3 1,4 3,3 3,4		
	M331A	2,1	M242C	2,3	M261D	1,3 3,2		
	M331D	1,1 2,1	M261D	2,2	M261G	3,4		
	M331J	2,1	M261G	2,2 2,3 3,3	M331A	2,4		
	M332A	2,1	M331A	2,2 2,3	M331D	2,4		
	M332B	2,1 2,2	M331D	1,3 2,2 2,3	M332B	3,4		
	M332C	2,1 2,2	M331J	2,2 2,3 3,2 3,3	M332C	2,4		
	M332D	2,1 2,2	M332A	4,4	M332D	2,4 3,4		
	M332E	2,1	M332B	3,3	M332E	2,3		
	M332F	2,1	M332C	2,3 3,2	M332F	2,3		
	M333A	1,1	M332D	2,3 3,2	M333A	2,4 4,3		
	M333B	2,1 2,2	M332E	2,2				
	M333C	2,1	M332F	1,3 2,2				
	M333D	2,1	M332G	3,3 4,3				
			M333A	3,3				
			M333B	3,3				
			M333C	2,2 3,3				
			M333D	3,3				

TABLE 3b. Regional Shrubland Classes (page 2)

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
WARM (3)	341E	3,1	342B – E	2,2	331A	4,3	331A	3,4 4,4
	342B – E	3,1	342B – W	3,2	341E	2,2 2,3	341E	3,3 3,4
	342B – W	3,1	342D	3,2	342B – E	2,3 3,3 3,4 4,2	342B – W	2,4 3,3 3,4
	342C	3,1	342H	4,2	342B – W	2,3	342C	2,4 3,3
	342D	1,1 3,1	342I	3,2	342C	2,3 3,2	342D	3,4
	M242C	4,2	M242C	4,3	342D	2,3 3,3	342H	3,4 4,3 4,4
	M261D	1,1	M331A	3,2 3,3	342H	3,2 3,3	342I	4,4
	M261G	3,1 3,2	M331D	3,4	342I	3,3 3,4	M261G	2,4
	M331A	3,1	M332C	4,2	M242C	4,4	M331D	4,4
	M331D	3,1 3,2	M333D	4,4	M261D	3,3 3,4 4,3	M332E	4,4
	M331J	3,1			M261G	4,3	M332F	4,3 4,4
	M332A	3,1			M331A	4,4		
	M332B	3,1 3,2			M331D	3,3 4,3		
	M332C	3,1			M331J	4,4		
	M332D	3,1			M332B	4,4		
	M332E	3,1			M332C	4,4		
	M332F	3,1			M332D	4,4		
	M332G	2,1 3,2			M332E	3,3 3,4		
	M333A	3,1			M332F	3,3		
	M333B	3,1			M332G	4,4		
	M333C	3,1			M333A	4,4		
	M333D	2,2 3,1			M333B	4,4		
HOT (4)	331A	3,3	341E	3,2	341E	4,2	341E	4,3 4,4
	341E	4,1	342B – W	4,2	342B–E	4,3	342B – E	4,4
	342B – E	4,1	342C	4,1 4,3	342C	3,4 4,4	342B – W	4,3 4,4
	342B – W	4,1	342H	4,1	342D	4,4	M261G	4,4
	342D	4,1	342I	4,3	M332D	4,3		
	342I	2,1 3,1	M261G	4,2	M332E	4,3		
	M261G	4,1	M332D	4,2				
	M331D	4,1	M333A	4,2				
	M332A	4,1						
	M332C	4,1						
	M332D	4,1						
	M332E	4,1						
	M332F	4,1						
	M333B	3,2 4,2						
	M333C	3,2						
	M333D	3,2 4,2						

TABLE 3c. Regional Herbland Classes

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
COLD (1)	342B – E	1,1	342B–E	1,2	342B – W	1,2	M332C	1,4
	342B – W	1,1	M242C	1,2	M242C	1,3 1,4	M332D	1,4
	M242C	1,1	M331A	1,2	M331A	1,3	M332E	1,4
	M261G	1,1	M331J	1,2	M331J	1,3	M332F	1,4
	M331A	1,1	M332C	1,3	M332A	1,3		
	M332B	1,1	M332D	1,3	M332E	1,3		
	M332C	1,1	M332E	1,2	M332F	1,3		
	M332D	1,1	M332F	1,2				
	M332E	1,1	M333B	1,2				
	M332F	1,1	M333C	1,2				
	M332G	1,1	M333D	1,2				
	M333A	1,1						
	M333B	1,1						
	M333C	1,1						
	M333D	1,1						
COOL (2)	341E	2,1	342B – E	2,2	331A	2,2 2,3	M332D	2,4
	342B–E	2,1	342B – W	2,2	342C	3,3	M332E	2,4
	342B–W	2,3	M242C	2,3	342I	1,1 2,2	M332F	2,4
	342C	2,1	M261G	2,2 3,3	M242C	3,3		
	342D	2,1	M331A	2,2	M331A	2,3 3,2 3,3		
	M242C	2,1 2,2	M331D	1,3 1,4 2,4	M331D	2,3		
	M261D	2,1	M331J	2,2	M331J	3,3		
	M261G	2,1	M332B	2,2 2,3	M332B	3,3		
	M331A	2,1	M332D	2,2 3,2	M332C	3,3		
	M331D	1,1 1,2	M332E	2,2	M332D	2,3 3,3		
	M332A	2,1	M332F	2,2	M332E	2,3 3,3		
	M332B	1,1 2,1 3,1	M332G	1,3 2,2 2,3 2,4	M332F	2,3		
	M332C	1,2	M333A	1,2 1,3	M332G	3,3		
	M332D	1,2 2,1	M333B	2,2 3,3	M333A	2,3 3,3		
	M332E	2,1	M333C	2,2 3,3	M333B	2,3 3,4 4,3		
	M332F	2,1	M333D	2,3	M333C	2,3 3,4 4,4		
	M333A	2,1 3,1 3,2			M333D	3,3 3,4 4,3		
	M333B	2,1						
	M333C	2,1						
	M333D	2,1 2,2 3,1						

TABLE 3c. **Regional Herbland Classes** (page 2)

MOISTURE:	WET (1)		MOIST (2)		DRY (3)		VERY DRY (4)	
TEMP:	Sections	Groups	Sections	Groups	Sections	Groups	Sections	Groups
WARM (3)	331A	1,2 3,1	341E	3,2 3,3	331A	3,3	331A	3,4 4,4
	341E	3,1	342B – E	3,2	342B–E	3,4	342C	4,3
	342B – E	3,1	342B – W	3,2	342B – W	3,3 3,4	342H	3,3 3,4 4,3
	342B – W	2,1 3,1	342C	2,2	342C	2,3	342I	3,3 4,4
	342C	3,1	342D	3,2	342D	2,3	M242C	4,4
	342D	3,1			342H	2,2	M261G	4,3 4,4
	342H	1,1			342I	3,2	M331A	4,4
	M242C	3,1			M242C	4,3	M331J	4,4
	M331A	3,1			M261G	3,4	M332C	4,4
	M331D	3,1			M331A	3,4 4,3	M332D	4,4
	M332A	3,1			M332B	4,4	M332E	3,4
	M332B	3,2			M332C	4,3	M332F	3,4
	M332D	3,1			M332D	4,3	M332G	3,4 4,4
	M332E	3,1					M333B	4,4
	M332F	3,1					M333D	4,4
	M333B	3,1 3,2						
	M333C	3,1 3,2						
	M333D	3,2						
HOT (4)	341E	4,1	341E	4,2	331A	3,2 4,3	341E	4,4
	342B – E	4,1	342B – E	4,3	341E	4,3	342B – W	4,4
	342B – W	4,1	342B–W	4,2	342B – W	4,3	M332E	4,4
	M242C	4,1	342C	4,2	342C	3,2	M332F	4,4
	M261D	4,1	M261G	3,2	342H	4,1		
	M261G	4,1	M332C	4,2	342I	4,2 4,3		
	M331A	4,1	M332D	4,2	M261D	4,4		
	M332B	4,1	M332G	4,2	M261G	4,2		
	M332D	4,1			M331D	4,4		
	M332F	4,1			M332G	4,3		
	M333B	4,1						
	M333C	4,1						
	M333D	4,1						

TABLE 4. Coarse level Potential Vegetation classification: Distribution of vegetation types (i.e., the groups defined at the regional level) in the temperature-moisture gradient matrix.

MOISTURE:

TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)	ARID (5)
COLD (1)	COLD WET FORESTS COLD WET SHRUBLANDS COLD MOIST SHRUBLANDS COLD WET HERBLANDS COLD MOIST HERBLANDS COOL MOIST HERBLANDS	COLD MOIST FORESTS	COLD DRY FORESTS COLD DRY SHRUBLANDS COLD DRY HERBLANDS	COLD VERY DRY FORESTS COLD VERY DRY SHRUBLANDS COOL VERY DRY SHRUBLANDS COLD VERY DRY HERBLANDS COOL VERY DRY HERBLANDS	
COOL (2)	COOL WET FORESTS COOL WET SHRUBLANDS COOL WET HERBLANDS	COOL MOIST FORESTS	COOL DRY FORESTS	COOL VERY DRY FORESTS	
WARM (3)	WARM WET FORESTS WARM WET SHRUBLANDS WARM WET HERBLANDS	WARM MOIST FORESTS	WARM DRY FORESTS	WARM VERY DRY FORESTS	
HOT (4)	HOT WET FORESTS HOT WET SHRUBLANDS HOT WET HERBLANDS HOT MOIST HERBLANDS	HOT MOIST FORESTS COOL MOIST SHRUBLANDS COOL DRY HERBLANDS WARM MOIST HERBLANDS	HOT DRY FORESTS WARM MOIST SHRUBLANDS WARM DRY HERBLANDS	HOT VERY DRY FORESTS COOL DRY SHRUBLANDS WARM DRY SHRUBLANDS WARM VERY DRY HERBLANDS	WARM VERY DRY SHRUBLANDS
VERY HOT (5)			HOT MOIST SHRUBLANDS HOT DRY HERBLANDS	HOT DRY SHRUBLANDS HOT VERY DRY HERBLANDS	HOT VERY DRY SHRUBLANDS

TABLE 5. Coarse level Potential Vegetation classification: List of coarse level classes and names.

COARSE LEVEL CLASS	NAME
1,1	ALPINE & COLD SUBALPINE WETLAND/RIPARIAN TYPES
1,2	COLD, MOIST SUBALPINE FORESTS
1,3	DRY ALPINE & COLD DRY SUBALPINE PARKLANDS
1,4	VERY DRY ALPINE & TIMBERLINE/COLD SUBALPINE GROVELANDS
2,1	COOL SUBALPINE WETLAND/RIPARIAN TYPES
2,2	COOL, MOIST FORESTS
2,3	COOL, DRY FORESTS
2,4	COOL, VERY DRY FORESTS
3,1	WARM MONTANE WETLAND/RIPARIAN TYPES
3,2	WARM, MOIST FORESTS
3,3	WARM, DRY FORESTS
3,4	WARM, VERY DRY FORESTS
4,1	HOT VALLEY & PLAIN WETLAND/RIPARIAN TYPES
4,2	HOT, MOIST LOWER TREELINE/FOOTHILLS FORESTS, SHRUBLANDS & HERBLANDS
4,3	HOT, DRY SHRUB & GRASS STEPPE TO OPEN LOWER TREELINE FORESTS
4,4	HOT, VERY DRY CANYON SHRUB-STEPPE TO OPEN LOWER TREELINE FORESTS
4,5	HOT, ARID SHRUB-STEPPE
5,3	VERY HOT, SEASONALLY-FLOODED SALT-DESERT BASINS
5,4	VERY HOT, VERY DRY SALT-DESERT SHRUB
5,5	VERY HOT, ARID SALT-DESERT SHRUB

TABLE 6. List of site parameter/GIS rules used in the "vegetation-site" model.

ELEVATION	ASPECT	SLOPE
0 -304 m	NE	FLAT
305 -609 m	SW	5 - 29%
610 -914 m	FLAT	30 - 59%
915-1219 m		60 +
1220-1523 m		
1524-1828 m		
1829-2133 m		
2134-2438 m		
2439-2743 m		
2744-3047 m		
3048-3352 m		
3353-3657 m		
3658-3962 m		
3963-4267 m		

TABLE 7. Calibration of the "vegetation–site" rules for the GIS model. Example shown for section M333C, the Northern Rockies. See text for further explanation and Appendix 1 for the full names of the plant associations and their references.

GRADIENTS			VEGETATION–SITE RULES		
TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/MEFE	1220–2590	ALL	ALL
1	3	LALY–ABLA	1829–2285	FLAT,NE	ALL
1	3	ABLA/LUGLH			
1	4	ABLA/VASC	1982–2285	ALL	ALL
1	4	ABLA–PIAL/VASC			
1	4	PIAL–ABLA			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	ABLA/OPHO			
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	610–1828	ALL	ALL
2	2	THPL/GYDR			
2	2	TSME/CLUN2			
2	2	ABLA/CLUN2			
2	2	PICEA/CLUN2			
2	3	ABLA/VACE	1220–2133	SW	GT5
2	3	PSME/LIBO3			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE	762–1219	ALL	LT30
2	4	PICEA/VACE			
3	1	THPL/OPHO		NOT MAPPED	
3	1	ABGR/SETR			
3	1	PICEA/COSE16			
3	2	THPL/CLUN2	1067–1523	ALL	LT60
3	2	THPL/ASCA2			
3	2	ABGR/LIBO3			
3	2	ABGR/CLUN2			
3	3	PSME/CARU	1067–1676	SW	5–59
3	3	PSME/PHMA5			
3	3	ABGR/PHMA5			
3	3	PSME/VAGL			
3	4	PSME/SYAL		NOT MAPPED	
4	1	POTR5/COSE16		NOT MAPPED	
4	1	POTR15/COSE16			
4	1	PICEA/LYAM3			
4	1	PSME/COSE16			
4	2	POTR5/OSOC		NOT MAPPED	

TABLE 7 (cont)

GRADIENTS			VEGETATION-SITE RULES		
TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		SHRUBLANDS			
1	1	SAPL2/CASC12	NOT MAPPED		
1	1	SACA4/CARO6			
1	1	KAMI/CASC12			
1	2	PHEM/ANLA3	NOT MAPPED		
2	1	SAGE2/CAAQ	NOT MAPPED		
2	1	SAGE2/CACA4			
2	1	BEGL/CARO6			
2	2	SAWO/DECE	NOT MAPPED		
2	2	ALIN2			
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CARO6	NOT MAPPED		
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL	NOT MAPPED		
3	2	COSE16			
3	2	SAEX			
3	3	PEFL15/FESC	NOT MAPPED		
3	3	PEFL15/DECE			
		HERBACEOUS			
1	1	CACA4	NOT MAPPED		
1	1	SETR			
1	1	CASI2			
1	1	CASC12			
1	2	ALPINE RANGELAND	2286-2743	ALL	LT60
2	1	ELQU2	NOT MAPPED		
2	1	ELPA3			
2	1	CARO6			
2	1	CABU6			
2	1	CAAQ			
2	1	CALA11			
2	2	DECE-CAREX	NOT MAPPED		
2	2	DECE			
2	3	FEID-ELTR7	NOT MAPPED		
3	1	PHAU7	NOT MAPPED		
3	1	EQFL			
3	1	GLBO			
3	1	CAAP3			
3	2	POPA2	NOT MAPPED		
3	2	JUBA			
3	2	CANE2			
3	3	FEID-DECE	NOT MAPPED		
3	3	FEID-STRI2			
3	4	FESC-FEID	NOT MAPPED		
4	1	TYLA	NOT MAPPED		
4	1	SCAC			
4	4	FESC-PSSP6	NOT MAPPED		
4	4	FEID-PSSP6			
		ROCKS	2286-2590	NE,SW	GT60

TABLE 8. Frequency and relative percentage of main elevational belts: codes of section Potential Vegetation (PV) classes (listed below the elevation belt), number of section PV classes, number of plant associations by elevation belt, number of pixels intercepted by elevation belt, % representation of elevation belt of the section. An example is given for section M333c, the Northern Rockies. For all sections, see Appendix 9.

ELEVATION BELT (m)	SECTION PV CLASSES	# OF CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
610-914	F22 F24	2	7	16	0.12
915-1219	F22 F32 F33 F24	4	15	1733	13.39
1220-1523	F12 F22 F32 F23 F33	5	19	3073	23.74
1524-1828	F12 F22 F23 F33	4	15	3717	28.72
1829-2133	F12 F13 F23 F14	4	11	3345	25.84
2134-2438	F12 F13 F14 H12 ROCKS	5	7	984	7.60
2439-2743	F12 H12 ROCKS	3	2	75	0.58
TOTAL				12944	100.00

TABLE 9. Frequency and relative percentage of section Potential Vegetation classes: number of plant associations per class, number of pixels intercepted by each class, % representation of the section. Example provided for section M333C, the Northern Rockies. For all sections, see Appendix 10.

PNV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	1	2718	21.00
F22	3	1429	11.04
F32	4	626	4.84
F13	2	1609	12.43
F23	5	3611	27.90
F33	4	612	4.73
F14	3	928	7.17
F24	2	1084	8.37
H12	1	323	2.50
ROCKS	N/A	4	0.03
TOTAL	25	12944	100.00

TABLE 10. Frequency and relative percentage of regional PV vegetation classes: number of sections, number of section PV classes, number of plant associations, number of pixels (1 km X 1 km) intercepted by each regional PV class, % representation of the region.

Table 10a. **Forest classes.**

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO-CIATIONS	# OF PIXELS	% OF THE CRB
F1,1	15	20	18	9,956	1.21
F1,2	11	12	20	9,821	1.19
F1,3	15	16	34	36,000	4.37
F1,4	15	16	31	11,775	1.43
F2,1	17	25	28	3,819	0.46
F2,2	18	25	80	43,936	5.34
F2,3	19	27	79	52,987	6.44
F2,4	7	7	30	12,302	1.49
F3,1	16	16	25	2,331	0.28
F3,2	17	27	55	21,072	2.56
F3,3	24	47	83	98,666	11.99
F3,4	13	15	44	17,100	2.08
F4,1	12	20	36	2,643	0.32
F4,2	7	10	36	10,997	1.34
F4,3	14	18	40	16,771	2.04
F4,4	9	16	40	22,367	2.72
Subtotal				372,543	45.26

Table 10b. **Shrubland classes.**

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO-CIATIONS	# OF PIXELS	% OF THE CRB
S1,1	14	19	18	45	0.01
S1,2	3	3	6	69	0.01
S1,3	8	10	9	5,091	0.62
S1,4	1	1	2	75	0.01
S2,1	20	26	48	756	0.09
S2,2	24	41	52	67,037	8.15
S2,3	17	27	29	29,200	3.55
S3,1	22	28	43	4,132	0.50
S3,2	10	11	18	26,593	3.23
S3,3	22	34	44	158,715	19.29
S3,4	11	19	42	26,247	3.19
S4,1	16	19	15	3,158	0.38
S4,2	8	9	15	14,744	1.79
S4,3	6	7	13	27,911	3.39
S4,4	4	6	28	11,874	1.44
Subtotal				375,647	45.65

Table 10c. **Herbland classes.**

REGIONAL PV CLASS	# OF SECTIONS	# OF SECTION CLASSES	# OF PLANT ASSO-CIATIONS	# OF PIXELS	% OF THE CRB
H1,1	15	15	12	37	0.00
H1,2	11	11	14	1,604	0.19
H1,3	7	8	15	4,230	0.51
H1,4	4	4	4	103	0.01
H2,1	20	29	33	545	0.07
H2,2	16	27	20	1,650	0.20
H2,3	17	30	17	28,284	3.44
H2,4	3	3	4	16	0.00
H3,1	18	22	19	336	0.04
H3,3	13	15	11	16,184	1.97
H3,4	15	21	20	14,307	1.74
H4,1	13	13	12	2,359	0.29
H4,2	8	8	9	209	0.03
H4,3	10	12	14	2,540	0.31
Subtotal				72,404	8.80
ROCKS	10	N/A	N/A	2,328	0.28
TOTAL				822,922	100.00

* Three regional PV classes were not mapped, S2,4, H3,2 & H4,4. This is because the section level PV classes included in these regional classes were not mapped at the section level.

TABLE 11. Frequency and relative percentage of coarse PV vegetation classes: number of sections, number of regional and sectional PV classes, number of plant associations, number of pixels intercepted by each coarse PV class, % representation of the region.

COARSE PV CLASS	# OF SECTIONS	# OF REGIONAL PV CLASSES	# OF SECTION PV CLASSES	# OF PLANT ASSOC.	# OF PIXELS	% OF THE CRB
1,1	18	6	95	77	13,361	1.62
1,2	11	1	12	20	9,821	1.19
1,3	17	3	34	58	45,321	5.51
1,4	17	5	29	43	11,969	1.45
2,1	22	3	80	109	5,120	0.62
2,2	18	1	25	80	43,936	5.34
2,3	19	1	27	79	52,987	6.44
2,4	7	1	7	30	12,302	1.49
3,1	25	3	66	87	6,799	0.83
3,2	17	1	27	55	21,072	2.56
3,3	24	1	47	83	98,666	11.99
3,4	13	1	15	44	17,100	2.08
4,1	24	4	60	72	8,369	1.02
4,2	25	4	87	111	78,034	9.48
4,3	18	3	44	69	71,648	8.71
4,4	23	4	98	123	226,466	27.52
4,5	11	1	19	42	40,554	4.93
5,3	12	2	21	29	17,284	2.10
5,4	8	2	11	15	27,911	3.39
5,5	4	1	6	28	11,874	1.44
ROCKS	10	N/A	N/A	N/A	2,328	0.28
TOTAL					822,922	100.00

TABLE 12a. Comparison between observed section level potential vegetation (PV) classes and predicted (mapped) section level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS																							
	F11	F12	F13	F14	F21[*]	F22	F23	F24	F31[*]	F32	F33	F34[*]	S21[*]	S22[*]	S31[*]	S32[*]	S33[*]	H11[*]	H12	H21[*]	H31[*]	H32[*]	H41[*]	Σ	%
F11	0	26	9	6	0	1	21	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0
F12	0	96	18	3	0	5	59	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	183	52
F13	0	117	256	90	0	0	152	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	627	41
F14	0	5	9	10	0	0	14	0	0	1	0	0	0	0	0	0	0	0	6	0	0	0	0	45	22
F21	0	11	1	0	0	17	3	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	36	0
F22	0	297	9	4	0	154	180	70	0	47	38	0	0	0	0	0	0	0	0	0	0	0	0	799	19
F23	0	79	19	21	0	20	119	19	0	20	16	0	0	0	0	0	0	0	1	0	0	0	0	314	38
F24	0	2	0	0	0	17	1	2	0	4	8	0	0	0	0	0	0	0	0	0	0	0	0	34	6
F31	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
F32	0	4	0	0	0	81	2	9	0	84	22	0	0	0	0	0	0	0	0	0	0	0	0	202	42
F33	0	25	0	3	0	10	55	2	0	3	17	0	0	0	0	0	0	0	0	0	0	0	0	115	15
F34	0	11	0	0	0	9	4	3	0	2	17	0	0	0	0	0	0	0	0	0	0	0	0	46	0
S21	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0
S22	0	2	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0
S31	0	0	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0
S32	0	0	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0
S33	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
H11	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
H12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H21	0	2	3	0	0	10	2	1	0	2	6	0	0	0	0	0	0	0	0	0	0	0	0	26	0
H31	0	0	1	0	0	5	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	11	0
H34	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0
H41	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Σ	0	678	327	137	0	343	623	114	0	172	132	0	0	0	0	0	0	0	19	0	0	0	0	(738) 2545	29
%		14	78	7		45	19	2		49	13								0					29	

[*] Class not mapped in Northern Rockies section.

TABLE 12b. Comparison between observed regional level potential vegetation (PV) classes and predicted (mapped) regional level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS																			
	F11	F13	F14	F21*	F22	F23	F32	F33	S21*	S22*	S31*	S41*	H11*	H12	H21*	H23*	H31*	H41*	Σ	%
F11	**122**	27	9	0	6	80	2	4	0	0	0	0	0	0	0	0	0	0	250	49
F13	117	**256**	90	0	0	152	0	0	0	0	0	0	0	12	0	0	0	0	627	41
F14	5	9	**10**	0	0	14	1	0	0	0	0	0	0	6	0	0	0	0	45	44
F21	11	1	0	**0**	18	3	2	3	0	0	0	0	0	0	0	0	0	0	38	0
F22	297	9	4	0	**154**	180	47	108	0	0	0	0	0	0	0	0	0	0	799	19
F23	79	19	21	0	20	**119**	20	35	0	0	0	0	0	1	0	0	0	0	314	38
F32	4	0	0	0	81	2	**84**	31	0	0	0	0	0	0	0	0	0	0	202	42
F33	38	0	3	0	36	60	9	**49**	0	0	0	0	0	0	0	0	0	0	195	25
S21	0	0	0	0	0	0	2	1	**0**	0	0	0	0	0	0	0	0	0	3	0
S22	2	1	0	0	4	1	1	1	0	**0**	0	0	0	0	0	0	0	0	10	0
S31	0	0	0	0	0	1	0	3	0	0	**0**	0	0	0	0	0	0	0	4	0
S41	0	1	0	0	1	0	1	1	0	0	0	**0**	0	0	0	0	0	0	4	0
H11	1	0	0	0	0	1	0	0	0	0	0	0	**0**	0	0	0	0	0	2	0
H12	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	0	0	0	0	0	
H21	2	3	0	0	10	2	2	7	0	0	0	0	0	0	**0**	0	0	0	26	0
H23	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	**0**	0	0	12	0
H31	0	1	0	0	5	2	0	3	0	0	0	0	0	0	0	0	**0**	0	11	0
H41	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	**0**	3	0
Σ	678	327	137	0	343	623	172	246	0	0	0	0	0	19	0	0	0	0	(804) 2545	32
%	18	78	15		45	19	49	20						0					32	

*Class not mapped in Northern Rockies section.

TABLE 12c. Comparison between observed coarse level potential vegetation (PV) classes and predicted (mapped) coarse level PV classes for plot locations in the Northern Rockies section of the Columbia River Basin. Observed classes derived from field identification of potential vegetation on plots. Omitted classes lacked occurrences on both plots and map in the section. Bold-faced numbers indicate locations with identical observed and predicted classes.

OBSERVED CLASS	PREDICTED (MAPPED) CLASS												
	1,1	1,3	1,4	2,1*	2,2	2,3	3,1*	3,2	3,3	4,1*	4,2*	Σ	%
1,1	**123**	27	9	0	6	81	0	2	4	0	0	252	49
1,3	129	**256**	90	0	0	152	0	0	0	0	0	627	41
1,4	11	9	**10**	0	0	14	0	1	0	0	0	45	22
2,1	13	4	0	**0**	28	5	0	6	11	0	0	67	0
2,2	297	9	4	0	**154**	180	0	47	108	0	0	799	19
2,3	80	19	21	0	20	**119**	0	20	35	0	0	314	38
3,1	0	1	0	0	5	3	**0**	0	6	0	0	15	0
3,2	4	0	0	0	81	2	0	**84**	31	0	0	202	42
3,3	38	0	3	0	36	60	0	9	**49**	0	0	195	25
4,1	0	1	0	0	3	0	0	2	1	**0**	0	7	0
4,2	2	1	0	0	10	7	0	1	1	0	**0**	22	0
Σ	697	327	137	0	343	623	0	172	246	0	0	(795) 2545	31
%	18	78	7		45	19		49	20			31	

*Class not mapped in Northern Rockies section.

TABLE 13a. Evaluation of section level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for F23 are F13, F22, F24, and F33; total number of adjacent locations is divided by 4) for plot locations in the Northern Rockies section of the Columbia River Basin. Only forest classes included in evaluation.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSERVED	PERCENT CORRECT
F11	0	13	13	67	19
F12	96	8	104	183	57
F13	256	120	376	615	61
F14	10	5	15	39	38
F21	0*	6	6	36	17
F22	154	131	285	799	36
F23	119	19	138	313	44
F24	2	0.3	2.3	34	7
F31	0*	0.5	0.5	2	25
F32	84	34	118	202	58
F33	17	19	36	115	31
F34	0*	10	10	46	22
TOTAL			1104	2451	45

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PREDICTED	PERCENT CORRECT
F11	0	0	0	0	
F12	96	147	243	673	36
F13	256	15	271	321	84
F14	10	45	55	137	40
F21	0*	0	0	0	
F22	154	31	185	315	59
F23	119	97	216	610	35
F24	2	7	9	110	8
F31	0*	0	0	0	
F32	84	17	101	165	61
F33	17	18	35	120	29
F34	0*	0	0	0	
TOTAL			1115	2451	45

*Class not mapped in Northern Rockies section.

TABLE 13b. Evaluation of regional level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for F23 are F13, F22, and F33; total number of adjacent locations is divided by 3) for plot locations in the Northern Rockies section of the Columbia River Basin. Only forest classes included in evaluation.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSER-VED	PERCENT CORRECT
F11	122	0	122	250	49
F13	256	121	377	615	61
F14	10	9	19	39	49
F21	0*	15	15	38	39
F22	154	76	230	799	29
F23	119	25	144	313	46
F32	84	56	140	202	69
F33	49	35	84	195	43
TOTAL			1131	2451	46

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PRED-ICTED	PERCENT CORRECT
F11	122	11	133	673	20
F13	256	14	270	321	84
F14	10	90	100	137	73
F21	0*	0	0	0	
F22	154	40	194	315	62
F23	119	131	250	610	41
F32	84	28	112	165	68
F33	49	33	82	230	36
TOTAL			1141	2451	47

*Class not mapped in Northern Rockies section.

TABLE 13c. Evaluation of coarse level potential vegetation (PV) map performance using both identical and weighted average of adjacent PV classes (e.g., existing adjacent classes for 2,3 are 1,3, 2,2, and 3,3; total number of adjacent locations is divided by 3) for plot locations in the Northern Rockies section of the Columbia River Basin.

OBSERVED CLASS	NUMBER OF LOCATIONS IN IDENTICAL PREDICTED (MAPPED) CLASS	WEIGHTED AVERAGE OF ADJACENT PREDICTED (MAPPED) CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL OBSERVED	PERCENT CORRECT
1,1	123	0	123	252	49
1,3	256	121	377	627	60
1,4	10	9	19	45	42
2,1	0*	14	14	67	21
2,2	154	76	230	799	29
2,3	119	25	144	314	46
3,1	0*	0	0	15	0
3,2	84	28	112	202	55
3,3	49	35	84	195	43
4,1	0*	0	0	7	0
4,2	0*	0.5	0.5	22	2
TOTAL			1104	2545	43

PREDICTED CLASS	NUMBER OF LOCATIONS IN IDENTICAL OBSERVED CLASS	WEIGHTED AVERAGE OF ADJACENT OBSERVED CLASSES	TOTAL IDENTICAL AND ADJACENT	TOTAL PREDICTED	PERCENT CORRECT
1,1	123	13	136	697	20
1,3	256	14	270	327	83
1,4	10	90	100	137	66
2,1	0*	0	0	0	
2,2	154	43	197	343	57
2,3	119	131	250	623	40
3,1	0*	0	0	0	
3,2	84	14	98	172	57
3,3	49	33	82	246	33
4,1	0*	0	0	0	
4,2	0*	0	0	0	
TOTAL			1133	2545	45

*Class not mapped in Northern Rockies section.

LIST OF WORKSHOP PARTICIPANTS, THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED

NAME	AGENCY	MISSOULA MONTANA 5/10-13/94	PORTLAND OREGON 5/24/94	BOISE IDAHO 6/7-9/94	PORTLAND OREGON 6/13/94	MISSOULA MONTANA 9/21/94	PORTLAND OREGON 9/94	RENO NEVADA 9/94
Terry Aho	NRCS		X					
Vic Applegate	USFS		X				X	
John Arnold	PC			X				
Dave Atkins	USFS		X				X	
Joe Bailey	USFS			X				
Steve Bateman	USFS	X						
Rita Beard	USFS				X			
Doug Berglund	USFS	X						
Mike Boltz	BLM			X				
Jo Booser	USFS				X			
Susan Boudreau	USFS		X	X				
Patrick Bourgeron	WHTF	X	X	X	X		X	X
Ken Brewer	USFS			X				
Lew Brown	BLM			X				
James Chamberlain	USFS		X					
Larry Chitwood	USFS		X					
Lee Clark	USFS					X		
Steve Cooper	MTNHP	X	X	X		X	X	
Jim Cornwell	NRCS			X				
Rex Crawford	WANHP		X		X		X	
Lynn Danly	BLM			X				
Randy Davis	USFS			X		X		
Carl Davis	USFS		X					
Ted Demetriades	USFS			X				
Bruce Easton	BLM			X				
Lisa Engelking	WHTF		X	X				
Clif Fanning	BLM		X					
Jean Findley	BLM				X			
Steve Fletcher	USFS				X			
Gary Ford	USFS	X	X	X	X			
Dennis Froeming	NRCS			X				
Tom Frost	USGS		X					
Steve Gibson	USFS				X			
Caroline Gordon	USFS		X					
Pat Green	USFS					X		
Dave Hayes	USFS	X						
Stephen Hiebert	USFS				X			
Brian Hockett	BLM					X		
Steve Holzman	USFWS				X			
Bill Hopkins	USFS		X		X			
Ed Horn	BLM				X			
Kent Houston	USFS					X		
Gary Jackson	USFS			X				
Harry Jageman	USFS	X						
Mark Jensen	USFS	X						
Darwin Jeppesen	BLM			X				

LIST OF WORKSHOP PARTICIPANTS (cont), THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED

NAME	AGENCY	MISSOULA MONTANA 5/10-13/94	PORTLAND OREGON 5/24/94	BOISE IDAHO 6/7-9/94	PORTLAND OREGON 6/13/94	MISSOULA MONTANA 9/21/94	PORTLAND OREGON 9/94	RENO NEVADA 9/94
Steven Jirik	BLM		X	X				
Charlie Johnson	USFS		X		X			
Rod Jorgenson	USFS			X				
Jimmy Kagan	ORNHP		X		X		X	X
Todd Keeler-Wolf	CANDDB							X
Nancy Ketranos	BLM		X					
Lou Kuennan	USFS	X				X		
Larry Laing	USFS	X				X		
Scott Lambert	NRCS				X			
Duane Lammers	USFS		X					
Jean Lavell	USFS	X						
Dan Leavell	USFS	X				X		
Terry Lillybridge	USFS				X			
John Lott	USFS			X				
Maria Mantas	USFS					X		
Dave Marben	USFS			X				
Harold Maxwell	USDA			X				
Ken McBride	USFS	X				X		
[illegible]yl McCaffrey	BLM		X		X			
[illegible]lenakis	USFS							X
Bob Meurisse	USFS		X					
Duane Monte	USFS			X				
Jim Morefield	NVNHP							X
Bob Moseley	IDCDC		X	X			X	X
Jan Nachlinger	NVFO							X
Jon Nakoe	USFS				X			
Norman Nass	USFS			X				
John Nesser	USFS		X					
Jerry Niehoff	USFS		X					
Vince Novotny	USFS				X			
Lois Olsen	USFS					X		
Dave Pacroretty	BLM				X			
Wayne Phillips	USFS					X		
Steve Popovich	BLM			X				
Sue Puddy	USFS				X			
Teal Purrington	BLM				X			
Marion Reid	WHTF						X	X
Jim Rineholt	USFS			X				
Gary Rollins	USFS				X			
Phil Rumpel	BLM				X			
Dave Rupert	USFS	X				X		
Bill Rush	USFS		X	X				
Michelle Satterfield	USFS				X			
Mike Schoter	USFS				X			
[illegible] Shelly	BLM			X				
[illegible]y Shovic	USFS					X		

LIST OF WORKSHOP PARTICIPANTS (cont), THEIR AGENCY AFFILIATIONS & WORKSHOPS ATTENDED

NAME	AGENCY	MISSOULA MONTANA 5/10-13/94	PORTLAND OREGON 5/24/94	BOISE IDAHO 6/7-9/94	PORTLAND OREGON 6/13/94	MISSOULA MONTANA 9/21/94	PORTLAND OREGON 9/94	RENO NEVADA 9/94
Dean Sirucek	USFS	X				X		
Brad Smith	USFS		X		X			
Bob Spokas	USFS	X				X		
Barry Stern	USFS			X				
Joyce Stock	USFS	X						
Dan Svoboda	USFS					X		
Rick Tholen	BLM			X				
Thor Thorson	NRCS		X					
Craig Toss	USFWS				X			
John Townsley	USFS				X			
Larry Walker	BLM		X		X			
Dave Ward	BLM				X			
Larry Warren	USFS			X				
Dave Wentzel	USFS		X					
Louis Whitealer	BLM				X			
Dale Wilson	USFS			X				
Richard Wright	BLM			X				
Bill Wulf	USFS	X						
Julie Yocom	BLM				X			
Art Zack	USFS					X		
Dave Zalunardo	USFS				X			
Steve Zieroth	USFS				X			

AGENCY AFFILIATIONS:

BLM	US Dept. of Interior Bureau of Land Management
CANDDB	California Natural Diversity Database
IDCDC	Idaho Conservation Data Center
MTNHP	Montana Natural Heritage Program
NRCS	US Dept. of Agriculture Natural Resources Conservation Service
NVFO	Nevada Field Office, The Nature Conservancy
NVNHP	Nevada Natural Heritage Program
ORNHP	Oregon Natural Heritage Program
PC	Private Consultant
WANHP	Washington Natural Heritage Program
WHTF	Western Heritage Task Force, The Nature Conservancy
USFS	US Dept. of Agriculture Forest Service
USFWS	US Dept. of Interior Fish & Wildlife Service
USGS	US Dept. of Interior Geological Survey

APPENDIX 1. List of plant associations representing Potential Vegetation found within the Columbia River Basin, with references. Nomenclature of the plant species follows Kartesz (1994). Global ranks, as assigned by The Nature Conservancy, are listed, and provide a numerical assessment of the association's relative rarity across its entire range of distribution. G1 indicates critically imperiled, and G5 indicates the most common. The CCA column denotes whether a Community Characterization Abstract has been written for that association. Standardized acronyms are also listed for each association. Full citations for the references are provided in Part 2 of the appendix.

GLOBAL RANK	CCA	PLANT ASSOCIATION NAME AND CLASS	ACRONYM	REFERENCES
G3		ABIES AMABILIS-ABIES CONCOLOR/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABAM-ABCO/MANEN	13
G4		ABIES AMABILIS/ACER CIRCINATUM FOREST	ABAM/ACCI	13,207,208,514
G4		ABIES AMABILIS/ACHLYS TRIPHYLLA FOREST	ABAM/ACTR	215,217,514
G4		ABIES AMABILIS/CLINTONIA UNIFLORA FOREST	ABAM/CLUN2	13,508
G5		ABIES AMABILIS/GAULTHERIA SHALLON FOREST	ABAM/GASH	56,170,171,174,210,213,214,217,220
G4		ABIES AMABILIS/MENZIESIA FERRUGINEA FOREST	ABAM/MEFE	56,170,171,207,208,210,514
G5		ABIES AMABILIS/OPLOPANAX HORRIDUS FOREST	ABAM/OPHO	56,170,171,174,207,208,211,212, 213,214,216,217,220,514
G5		ABIES AMABILIS/RHODODENDRON ALBIFLORUM FOREST	ABAM/RHAL2	56,170,171,174,207,208,215,508,509,514
G5		ABIES AMABILIS/VACCINIUM ALASKENSE FOREST	ABAM/VAAL	56,170,171,174,210,211,212,213, 214,215,217,514
G4		ABIES AMABILIS/VACCINIUM MEMBRANACEUM FOREST	ABAM/VAME	56,174,207,208,210,211,212,213, 215,216,217,220,514
G4		ABIES AMABILIS/XEROPHYLLUM TENAX FOREST	ABAM/XETE	56,170,171,174,207,208,210,214,215,217
G3		ABIES CONCOLOR-ABIES X SHASTENSIS/CHIMAPHILA UMBELLATA FOREST	ABCO-ABSH/CHUM	13,234
G2		ABIES CONCOLOR-CALOCEDRUS DECURRENS-PINUS PONDEROSA/AMELANCHIER ALNIFOLIA FOREST	ABCO-CADE27-PIPO/AMAL2	235
G3		ABIES CONCOLOR-PINUS CONTORTA/CAREX PENSYLVANICA-STIPA OCCIDENTALIS FOREST	ABCO-PICO/CAPE6-STOC2	235
G2		ABIES CONCOLOR-PINUS LAMBERTIANA-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA FOREST	ABCO-PILA-PIPO/ARPA6	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA-BERBERIS SPP. FOREST	ABCO-PIPO/ARPA6-BERBE	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/CAREX PENSYLVANICA FOREST	ABCO-PIPO/CAPE6	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/CEANOTHUS VELUTINUS FOREST	ABCO-PIPO/CEVE	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/PURSHIA TRIDENTATA FOREST	ABCO-PIPO/PUTR2	130
G3		ABIES CONCOLOR-PINUS PONDEROSA/RIBES VISCOSISSIMUM FOREST	ABCO-PIPO/RIVI3	235
G3		ABIES CONCOLOR-PINUS PONDEROSA/SYMPHORICARPOS SPP. FOREST	ABCO-PIPO/SYMPH	12,235
G4		ABIES CONCOLOR-PSEUDOTSUGA MENZIESII/MAHONIA PIPERIANA FOREST	ABCO-PSME/MAPI3	13
G5	Y	ABIES CONCOLOR/ACER GLABRUM FOREST	ABCO/ACGL	3,5,13,126,128,129,164,295,341,449,523
G3		ABIES CONCOLOR/AMELANCHIER ALNIFOLIA-CORYLUS CORNUTA FOREST	ABCO/AMAL2-COCO6	13
G3		ABIES CONCOLOR/AMELANCHIER ALNIFOLIA/ANEMONE DELTOIDEA FOREST	ABCO/AMAL2/ANDE3	13
G5	Y	ABIES CONCOLOR/ARCTOSTAPHYLOS PATULA FOREST	ABCO/ARPA6	411,523
G3		ABIES CONCOLOR/CASTANOPSIS CHRYSOPHYLLA FOREST	ABCO/CACH6	234
G3		ABIES CONCOLOR/CEANOTHUS VELUTINUS FOREST	ABCO/CEVE	234,487
G3		ABIES CONCOLOR/CHIMAPHILA UMBELLATA FOREST	ABCO/CHUM	13
G3		ABIES CONCOLOR/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABCO/MANEN	12,13
G5		ABIES CONCOLOR/MAHONIA REPENS FOREST	ABCO/MARE11	5,129,164,205,261,295,328,341,383,411,523
G3		ABIES CONCOLOR/RUBUS NIVALIS FOREST	ABCO/RUNI2	13
G3		ABIES CONCOLOR/SYMPHORICARPOS ALBUS FOREST	ABCO/SYAL	234
G3		ABIES CONCOLOR/SYMPHORICARPOS MOLLIS FOREST	ABCO/SYMO	12,235
G3		ABIES CONCOLOR/VACCINIUM MEMBRANACEUM FOREST	ABCO/VAME	13
G3		ABIES GRANDIS-PICEA ENGELMANNII/MAIANTHEMUM STELLATUM FOREST	ABGR-PIEN/MAST4	468
G4		ABIES GRANDIS/ACER CIRCINATUM FOREST	ABGR/ACCI	468,514
G3	Y	ABIES GRANDIS/ACER GLABRUM FOREST	ABGR/ACGL	98,250,443
G3		ABIES GRANDIS/ACHLYS TRIPHYLLA FOREST	ABGR/ACTR	466,468,514
G2	Y	ABIES GRANDIS/ARCTOSTAPHYLOS NEVADENSIS WOODLAND	ABGR/ARNE	248,514
G4	Y	ABIES GRANDIS/ASARUM CAUDATUM FOREST	ABGR/ASCA2	98
G4	Y	ABIES GRANDIS/CALAMAGROSTIS RUBESCENS WOODLAND	ABGR/CARU	98,172,185,186,248,250,443,466,514
G3		ABIES GRANDIS/CAREX GEYERI WOODLAND	ABGR/CAGE2	466,468,514
G2	Y	ABIES GRANDIS/CASTANOPSIS CHRYSOPHYLLA FOREST	ABGR/CACH6	468
G5	Y	ABIES GRANDIS/CLINTONIA UNIFLORA FOREST	ABGR/CLUN2	90,98,100,250,385,443,462,509,513
G2	Y	ABIES GRANDIS/COPTIS OCCIDENTALIS FOREST	ABGR/COOC	250,443

G3		ABIES GRANDIS/HOLODISCUS DISCOLOR FOREST	ABGR/HODI	100,250,443,466,468,509
G5	Y	ABIES GRANDIS/LINNAEA BOREALIS FOREST	ABGR/LIBO3	98,100,185,248,250,443,468,509,528
G3		ABIES GRANDIS/MAHONIA NERVOSA VAR. NERVOSA FOREST	ABGR/MANEN	514
G4		ABIES GRANDIS/PAXISTIMA MYRSINITES FOREST	ABGR/PAMY	119,122,186,204
G3	Y	ABIES GRANDIS/PHYSOCARPUS MALVACEUS FOREST	ABGR/PHMA5	98,250,513
G3		ABIES GRANDIS/POLEMONIUM PULCHERRIMUM FOREST	ABGR/POPU3	468,516
G3	Y	ABIES GRANDIS/SENECIO TRIANGULARIS FOREST	ABGR/SETR	98
G3Q	Y	ABIES GRANDIS/SPIRAEA BETULIFOLIA FOREST	ABGR/SPBE2	98,250
G4		ABIES GRANDIS/SYMPHORICARPOS ALBUS FOREST	ABGR/SYAL	250,468,514
G2	Y	ABIES GRANDIS/TAXUS BREVIFOLIA FOREST	ABGR/TABR2	250
G3		ABIES GRANDIS/TRAUTVETTERIA CAROLINIENSIS FOREST	ABGR/TRCA	253
G3		ABIES GRANDIS/TRIENTALIS LATIFOLIA FOREST	ABGR/TRLA6	250
G2	Y	ABIES GRANDIS/VACCINIUM CESPITOSUM FOREST	ABGR/VACE	443,509,513
G3		ABIES GRANDIS/VACCINIUM GLOBULARE FOREST	ABGR/VAGL	98,443
G4		ABIES GRANDIS/VACCINIUM MEMBRANACEUM FOREST	ABGR/VAME	98,119,122,185,186,204,250
G3		ABIES GRANDIS/VACCINIUM MEMBRANACEUM-CLINTONIA UNIFLORA FOREST	ABGR/VAME-CLUN2	466
G4		ABIES GRANDIS/VACCINIUM SCOPARIUM FOREST	ABGR/VASC	185,250
G4		ABIES GRANDIS/XEROPHYLLUM TENAX FOREST	ABGR/XETE	98,443
G3		ABIES LASIOCARPA-PINUS ALBICAULIS/ARCTOSTAPHYLOS UVA-URSI WOODLAND	ABLA-PIAL/ARUV	90
G5		ABIES LASIOCARPA-PINUS ALBICAULIS/VACCINIUM SCOPARIUM WOODLAND	ABLA-PIAL/VASC	93,385
G5		ABIES LASIOCARPA/ACER GLABRUM FOREST	ABLA/ACGL	3,295,328,443,444,523
G4	Y	ABIES LASIOCARPA/ACTAEA RUBRA FOREST	ABLA/ACRU2	195,262,328,376,444,523
G4		ABIES LASIOCARPA/ALNUS VIRIDIS SSP. SINUATA FOREST	ABLA/ALVIS	385
G5		ABIES LASIOCARPA/ARNICA CORDIFOLIA FOREST	ABLA/ARCO9	230,304,385,403,443,444,444,524
G4		ABIES LASIOCARPA/ARNICA LATIFOLIA FOREST	ABLA/ARLA8	99,262,444
G5	Y	ABIES LASIOCARPA/CALAMAGROSTIS CANADENSIS FOREST	ABLA/CACA4	97,98,223,286,328,385,443,444,453
G5		ABIES LASIOCARPA/CALAMAGROSTIS RUBESCENS FOREST	ABLA/CARU	58,98,250,284,286,328,385,443, 444,509,513,514,523
G3		ABIES LASIOCARPA/CALTHA LEPTOSEPALA SSP. HOWELLII FOREST	ABLA/CALEH2	443
G5		ABIES LASIOCARPA/CAREX GEYERI FOREST	ABLA/CAGE2	6,223,262,284,286,385,443,444,453,493,523
G5		ABIES LASIOCARPA/CAREX ROSSII FOREST	ABLA/CARO5	444,523
G3		ABIES LASIOCARPA/CLEMATIS COLUMBIANA VAR. COLUMBIANA FOREST	ABLA/CLCOC2	385
G5		ABIES LASIOCARPA/CLINTONIA UNIFLORA FOREST	ABLA/CLUN2	98,122,250,385,513
G4		ABIES LASIOCARPA/COPTIS OCCIDENTALIS FOREST	ABLA/COOC	443
G3		ABIES LASIOCARPA/CORNUS CANADENSIS FOREST	ABLA/COCA13	512,513
G4		ABIES LASIOCARPA/GALIUM TRIFLORUM FOREST	ABLA/GATR3	385
G5		ABIES LASIOCARPA/JUNIPERUS COMMUNIS WOODLAND	ABLA/JUCO6	214,217,261,262,295,328,341,385 410,443,444,523
G4		ABIES LASIOCARPA/LEDUM GLANDULOSUM FOREST	ABLA/LEGL	195
G5		ABIES LASIOCARPA/LINNAEA BOREALIS FOREST	ABLA/LIBO3	101,216,250,262,385,443,444,508,509,514
G5		ABIES LASIOCARPA/LUZULA GLABRATA VAR. HITCHCOCKII FOREST	ABLA/LUGLH	98,385,444,514
G5		ABIES LASIOCARPA/MAHONIA REPENS FOREST	ABLA/MARE11	262,274,328,383,444,523
G5		ABIES LASIOCARPA/MENZIESIA FERRUGINEA FOREST	ABLA/MEFE	98,122,250,385,443,444
G3		ABIES LASIOCARPA/OPLOPANAX HORRIDUS FOREST	ABLA/OPHO	385
G4G5		ABIES LASIOCARPA/OSMORHIZA CHILENSIS FOREST	ABLA/OSCH	218,328,443,444
G4		ABIES LASIOCARPA/PAXISTIMA MYRSINITES FOREST	ABLA/PAMY	122,331,508
G5		ABIES LASIOCARPA/PEDICULARIS RACEMOSA FOREST	ABLA/PERA	218,328,444
G4		ABIES LASIOCARPA/PHYLLODOCE EMPETRIFORMIS WOODLAND	ABLA/PHEM	508
G4G5		ABIES LASIOCARPA/PHYSOCARPUS MALVACEUS FOREST	ABLA/PHMA5	328,443,444,523
G4		ABIES LASIOCARPA/RHODODENDRON ALBIFLORUM FOREST	ABLA/RHAL2	56,210,214,217,462,508,509,513,514
G5	Y	ABIES LASIOCARPA/RIBES MONTIGENUM FOREST	ABLA/RIMO2	219,293,328,381,383,385,434,443,444,523
G4		ABIES LASIOCARPA/SPIRAEA BETULIFOLIA FOREST	ABLA/SPBE2	444
G4		ABIES LASIOCARPA/STREPTOPUS AMPLEXIFOLIUS FOREST	ABLA/STAM2	98,195,250,328,376,443,444,523
G4		ABIES LASIOCARPA/SYMPHORICARPOS ALBUS FOREST	ABLA/SYAL	99,444

G4		ABIES LASIOCARPA/THALICTRUM OCCIDENTALE FOREST	ABLA/THOC	93,101,262,444
G3		ABIES LASIOCARPA/TRAUTVETTERIA CAROLINIENSIS FOREST	ABLA/TRCA	512,513,514
G5		ABIES LASIOCARPA/VACCINIUM CESPITOSUM FOREST	ABLA/VACE	274,328,385,443,513,523
G5		ABIES LASIOCARPA/VACCINIUM GLOBULARE FOREST	ABLA/VAGL	101,262,274,328,385,443,444,453
G4		ABIES LASIOCARPA/VACCINIUM MEMBRANACEUM FOREST	ABLA/VAME	93,167,185,214,217,250,513
G5	Y	ABIES LASIOCARPA/VACCINIUM MYRTILLUS FOREST	ABLA/VAMY2	3,7,49,129,164,222,227,228,249,259, 261,272,284,286,293,295,313,314, 315,318,319,322,341,381,477,523
G5	Y	ABIES LASIOCARPA/VACCINIUM SCOPARIUM FOREST	ABLA/VASC	6,7,49,93,101,122,126,139,176,179,185, 202,221,223,227,230,250,262,280,286,293, 319,328,331,335,381,383,385,401,404,443, 444,453,502,508,513,514
G5		ABIES LASIOCARPA/XEROPHYLLUM TENAX FOREST	ABLA/XETE	98,101,122,236,385,444,509,513
G3		ABIES X SHASTENSIS-TSUGA MERTENSIANA/ARCTOSTAPHYLOS NEVADENSIS FOREST	ABSH-TSME/ARNE	235
G3		ABIES X SHASTENSIS/CAREX PENSYLVANICA FOREST	ABSH/CAPE6	235
G3		ABIES X SHASTENSIS/VACCINIUM MEMBRANACEUM FOREST	ABSH/VAME	13
G4		ACER GLABRUM (DRAINAGE BOTTOM) SHRUBLAND	ACGL (DRAINAGE BOTTOM)	427
G2		ACER GRANDIDENTATUM/CALAMAGROSTIS RUBESCENS FOREST	ACGR3/CARU	70
G3		ACER NEGUNDO/CORNUS SERICEA FOREST	ACNE2/COSE16	376,380,525
G2?		ACER NEGUNDO/EQUISETUM ARVENSE FOREST	ACNE2/EQAR	380
G2		AGROSTIS EXARATA-AGROSTIS SCABRA HERBACEOUS VEGETATION	AGEX-AGSC5	473,474
G5		AGROSTIS STOLONIFERA HERBACEOUS VEGETATION	AGST2	195
G2		ALLENROLFEA OCCIDENTALIS SHRUBLAND	ALOC2	183,371
G3		ALNUS INCANA SHRUBLAND	ALIN2	155,195
G1		ALNUS INCANA-BETULA OCCIDENTALIS/(SALIX SPP.) SHRUBLAND	ALIN2-BEOC2/(SALIX)	193,311
G1		ALNUS INCANA-POPULUS TREMULOIDES/BETULA GLANDULOSA-RIBES SPP./CAREX SPP. SHRUBLAND	ALIN2-POTR5/BEGL-RIBES/CAREX	266
G1		ALNUS INCANA-POPULUS TREMULOIDES/CORNUS SERICEA SHRUBLAND	ALIN2-POTR5/COSE16	156
G1	Y	ALNUS INCANA-POPULUS TRICHOCARPA/(SALIX SPP.)/CAREX SPP. FOREST	ALIN2-POTR15/(SALIX)/CAREX	291
G3		ALNUS INCANA/CAREX SPP. SHRUBLAND	ALIN2/CAREX	156
G4		ALNUS INCANA/CORNUS SERICEA SHRUBLAND	ALIN2/COSE16	376,380,474
G2G3		ALNUS INCANA/MESIC FORB SHRUBLAND	ALIN2/MESIC FORB	376,380
G2G3		ALNUS INCANA/MESIC GRAMINOID SHRUBLAND	ALIN2/MESIC GRAMINOID	380
G3		ALNUS INCANA/RIBES HUDSONIANUM SHRUBLAND	ALIN2/RIHU	522
G2		ALNUS INCANA/SYMPHORICARPOS ALBUS SHRUBLAND	ALIN2/SYAL	269,270,291,379
G3		ALNUS RHOMBIFOLIA FOREST	ALRH2	334
G2		ALNUS RHOMBIFOLIA-ABIES GRANDIS FOREST	ALRH2-ABGR	334
G3		ALNUS RHOMBIFOLIA/AMELANCHIER ALNIFOLIA FOREST	ALRH2/AMAL2	334
G1	Y	ALNUS RHOMBIFOLIA/BETULA OCCIDENTALIS FOREST	ALRH2/BEOC2	334
G2		ALNUS RHOMBIFOLIA/CELTIS LAEVIGATA VAR. RETICULATA FOREST	ALRH2/CELAR	334
G1	Y	ALNUS RHOMBIFOLIA/PHILADELPHUS LEWISII FOREST	ALRH2/PHLE4	334
G2		ALNUS RHOMBIFOLIA/SAMBUCUS CERULEA FOREST	ALRH2/SACE3	334
G2?		ALNUS VIRIDIS SSP. SINUATA SHRUBLAND	ALVIS	195
G4Q		AMELANCHIER ALNIFOLIA/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SHRUBLAND	AMAL2/ARTR2/FEID	36
G3		ARCTOSTAPHYLOS PATULA/CEANOTHUS VELUTINUS-CEANOTHUS PROSTRATUS SHRUBLAND	ARPA6/CEVE-CEPR	469
G2	Y	ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS-STIPA LEMMONII SHRUBLAND	ARVI4-CECU/FEID-STLE2	12,371
G3		ARISTIDA LONGISETA-POA SECUNDA HERBACEOUS VEGETATION	ARLO3-POSE	121,462
G2	Y	ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS SPARSE SHRUBLAND	ARLO3-SPCR	250
G4G5		ARTEMISIA ARBUSCULA SSP. LONGILOBA SPARSE DWARF-SHRUBLAND	ARARL	300
G3		ARTEMISIA ARBUSCULA SSP. LONGILOBA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARARL/FEID	78,225,244,354,421,464,527
G3Q		ARTEMISIA ARBUSCULA SSP. LONGILOBA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARARL/POSE	37
G2	Y	ARTEMISIA ARBUSCULA SSP. THERMOPOLA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARART/FEID	225,421
G4		ARTEMISIA ARBUSCULA-CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-POA SECUNDA	ARAR8-CELE3/PSSP6-POSE	131

		SPARSE WOODLAND		
G3Q		ARTEMISIA ARBUSCULA-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARAR8-PUTR2/PSSP6-FEID	130
G5		ARTEMISIA ARBUSCULA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARAR8/FEID	37,39,40,185,222,300,354,476,527
G1G2	Y	ARTEMISIA ARBUSCULA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARAR8/LEAM	74
G5		ARTEMISIA ARBUSCULA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARAR8/POSE	36,37,39,41,42,205,420
G5		ARTEMISIA ARBUSCULA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARAR8/PSSP6	43,185,244,300,354,423,457,527
G4G5		ARTEMISIA ARBUSCULA/STIPA THURBERIANA SPARSE DWARF-SHRUBLAND	ARAR8/STTH2	527
G2G3		ARTEMISIA CANA SSP. VISCIDULA/DESCHAMPSIA CESPITOSA SHRUBLAND	ARCAV2/DECE	363,376,380
G4		ARTEMISIA CANA SSP. VISCIDULA/FESTUCA IDAHOENSIS SHRUBLAND	ARCAV2/FEID	51,354,363,522
G2		ARTEMISIA CANA-ARTEMISIA TRIDENTATA SSP. VASEYANA/POA CUSICKII SPARSE SHRUBLAND	ARCA13-ARTRV/POCU3	371
G1	Y	ARTEMISIA CANA/(ELYMUS CANINUS)-POA NEVADENSIS SPARSE SHRUBLAND	ARCA13/(ELCA11)-PONE3	312,371
G2		ARTEMISIA CANA/CAREX NEBRASCENSIS-POA CUSICKII SPARSE SHRUBLAND	ARCA13/CANE2-POCU3	291,379,519
G4		ARTEMISIA CANA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARCA13/FEID	354
G1	Y	ARTEMISIA CANA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARCA13/LECI4	371
G3		ARTEMISIA CANA/MUHLENBERGIA RICHARDSONIS SPARSE SHRUBLAND	ARCA13/MURI	172,225
G4		ARTEMISIA CANA/PASCOPYRUM SMITHII SHRUBLAND	ARCA13/PASM	195
G3G5		ARTEMISIA NOVA SPARSE DWARF-SHRUBLAND	ARNO4	28,38,59,205,296,336,382
G4G5		ARTEMISIA NOVA/ELYMUS ELYMOIDES SPARSE DWARF-SHRUBLAND	ARNO4/ELEL5	244,300,406
G4		ARTEMISIA NOVA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARNO4/FEID	354
G3G5		ARTEMISIA NOVA/HILARIA JAMESII SPARSE DWARF-SHRUBLAND	ARNO4/HIJA	158
G1G2	Y	ARTEMISIA NOVA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARNO4/LEAM	77
G4G5		ARTEMISIA NOVA/ORYZOPSIS HYMENOIDES SPARSE DWARF-SHRUBLAND	ARNO4/ORHY	40,244
G3		ARTEMISIA NOVA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARNO4/POSE	76,371
G5		ARTEMISIA NOVA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARNO4/PSSP6	22,24,38,43,161,162,237,305,476,479,527
G3G5		ARTEMISIA NOVA/STIPA COMATA SPARSE DWARF-SHRUBLAND	ARNO4/STCO4	22,24,38,411,527
G2	Y	ARTEMISIA PEDATIFIDA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARPE6/FEID	354
G4		ARTEMISIA RIGIDA/POA SECUNDA SPARSE DWARF-SHRUBLAND	ARRI2/POSE	121,185,250,251,462
G3		ARTEMISIA RIGIDA/PSEUDOROEGNERIA SPICATA SPARSE DWARF-SHRUBLAND	ARRI2/PSSP6	371
G3G4		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/FESTUCA IDAHOENSIS SHRUBLAND	ARTRT/FEID	244
G2G3		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/LEYMUS CINEREUS SHRUBLAND	ARTRT/LECI4	18,23,23
G2G3		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/PASCOPYRUM SMITHII SHRUBLAND	ARTRT/PASM	168,271,448,458
G4		ARTEMISIA TRIDENTATA SSP. TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRT/PSSP6	81,244,345,354,476
G1	Y	ARTEMISIA TRIDENTATA SSP. VASEYANA-CERCOCARPUS LEDIFOLIUS/ELYMUS CANINUS-POA SECUNDA SHRUBLAND	ARTRV-CELE3/ELCA11-POSE	131
G4Q		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS SHRUBLAND	ARTRV-SYOR2/BRCA5	244
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/FESTUCA IDAHOENSIS SHRUBLAND	ARTRV-SYOR2/FEID	72
G5		ARTEMISIA TRIDENTATA SSP. VASEYANA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRV-SYOR2/PSSP6	244,470
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/BROMUS CARINATUS SHRUBLAND	ARTRV/BRCA5	299
G3		ARTEMISIA TRIDENTATA SSP. VASEYANA/CAREX GEYERI SPARSE SHRUBLAND	ARTRV/CAGE2	253
G5		ARTEMISIA TRIDENTATA SSP. VASEYANA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTRV/FEID	51,134,168,221,222,238,244,262,285, 299,300,345,354,418,439,448,452,458,476
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/LEYMUS CINEREUS SHRUBLAND	ARTRV/LECI4	244,345
G4		ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRV/PSSP6	22,24,51,115,244,300,345,439,452
G2	Y	ARTEMISIA TRIDENTATA SSP. VASEYANA/STIPA OCCIDENTALIS SHRUBLAND	ARTRV/STOC2	253,371
G3G5		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-ATRIPLEX CONFERTIFOLIA SHRUBLAND	ARTRW8-ATCO	499
G2		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PERAPHYLLUM RAMOSISSIMUM/FESTUCA IDAHOENSIS SHRUBLAND	ARTRW8-PERA4/FEID	371
G3Q		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTRW8-PUTR2/PSSP6	222,285
G3		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/LEYMUS AMBIGUUS SHRUBLAND	ARTRW8/LEAM	221,222,262

G5Q		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/POA SECUNDA SHRUBLAND	ARTRW8/POSE	82,244
G5		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	ARTRW8/PSSP6	22,24,64,160,162,198,221,281,305, 366,430,440,448,458,476
G2	Y	ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA COMATA SHRUBLAND	ARTRW8/STCO4	81,225,518
G3		ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA THURBERIANA SHRUBLAND	ARTRW8/STTH2	37,39,40,42,43,79,80
G2		ARTEMISIA TRIDENTATA-ATRIPLEX CANESCENS-SARCOBATUS VERMICULATUS/(ORYZOPSIS HYMENOIDES) SHRUBLAND	ARTR2-ATCA2-SAVE4/(ORHY)	392
G5		ARTEMISIA TRIDENTATA-EPHEDRA VIRIDIS SHRUBLAND	ARTR2-EPVI	292,382,491
G1	Y	ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES-STIPA COMATA SPARSE SHRUBLAND	ARTR2-PUTR2/ORHY-STCO4	105,390
G4		ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTR2/FEID	36,121,185,225,331,354,390,461
G3		ARTEMISIA TRIDENTATA/FESTUCA SCABRELLA SPARSE SHRUBLAND	ARTR2/FESC	354
G2G4		ARTEMISIA TRIDENTATA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARTR2/LECI4	37,40,41,43,472,489,521
G3G5		ARTEMISIA TRIDENTATA/POA SECUNDA SHRUBLAND	ARTR2/POSE	121,346,347,412
G5		ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ARTR2/PSSP6	35,36,37,39,41,43,61,121,185,205, 225,300,331,346,347,354,390,461
G5		ARTEMISIA TRIDENTATA/STIPA COMATA SHRUBLAND	ARTR2/STCO4	35,38,76,81,121,225,297,331,390,471,472
G3		ARTEMISIA TRIPARTITA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	ARTR4/FEID	78,121,221,225,262,354
G2		ARTEMISIA TRIPARTITA/FESTUCA SCABRELLA SPARSE SHRUBLAND	ARTR4/FESC	492
G3		ARTEMISIA TRIPARTITA/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	ARTR4/PSSP6	79,80,121,225,331
G1	Y	ARTEMISIA TRIPARTITA/STIPA COMATA SPARSE SHRUBLAND	ARTR4/STCO4	121,225,331,492
G5		ATRIPLEX CANESCENS SHRUBLAND	ATCA2	28
G3G5		ATRIPLEX CANESCENS-ARTEMISIA TRIDENTATA SHRUBLAND	ATCA2-ARTR2	411,491
G5		ATRIPLEX CANESCENS-KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCA2-KRLA2	382
G5		ATRIPLEX CANESCENS/HILARIA JAMESII SHRUBLAND	ATCA2/HIJA	52,53,138,241,306,332,437,479, 480,482,498,500,501
G3G5		ATRIPLEX CANESCENS/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCA2/ORHY	484
G5Q		ATRIPLEX CANESCENS/SPOROBOLUS AIROIDES SHRUBLAND	ATCA2/SPAI	19,136,141,169,484
G5		ATRIPLEX CONFERTIFOLIA (COMMUNITY II) SHRUBLAND	ATCO (COMMUNITY II)	10,28,36,40,50,296,382,406
G5Q		ATRIPLEX CONFERTIFOLIA-ARTEMISIA SPINESCENS-SARCOBATUS VERMICULATUS SHRUBLAND	ATCO-ARSP5-SAVE4	42
G5		ATRIPLEX CONFERTIFOLIA-EPHEDRA NEVADENSIS SHRUBLAND	ATCO-EPNE	422,491
G3G5		ATRIPLEX CONFERTIFOLIA-KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCO-KRLA2	28,33,36,158
G4		ATRIPLEX CONFERTIFOLIA-LYCIUM SHOCKLEYI SHRUBLAND	ATCO-LYSH	28
G5		ATRIPLEX CONFERTIFOLIA-SARCOBATUS VERMICULATUS SHRUBLAND	ATCO-SAVE4	159,332
G5		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS SHRUBLAND	ATCO/ARSP5	33,40
G5Q		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS/KRASCHENINNIKOVIA LANATA SHRUBLAND	ATCO/ARSP5/KRLA2	42
G5Q		ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCO/ARSP5/ORHY	42
G3G5		ATRIPLEX CONFERTIFOLIA/ELYMUS ELYMOIDES SHRUBLAND	ATCO/ELEL5	485
G3G5		ATRIPLEX CONFERTIFOLIA/HILARIA JAMESII SHRUBLAND	ATCO/HIJA	10,52,53,83,118,181,201,241,306, 389,438,475,479,481,482,500
G3G5		ATRIPLEX CONFERTIFOLIA/KOCHIA AMERICANA SHRUBLAND	ATCO/KOAM	201,485
G2	Y	ATRIPLEX CONFERTIFOLIA/LEYMUS AMBIGUUS SHRUBLAND	ATCO/LEAM	74
G2		ATRIPLEX CONFERTIFOLIA/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCO/ORHY	23,36,42,77,271,273,406,490,521
G3		ATRIPLEX CONFERTIFOLIA/PSEUDOROEGNERIA SPICATA SHRUBLAND	ATCO/PSSP6	18,22,24
G3G5		ATRIPLEX CONFERTIFOLIA/TETRADYMIA GLABRATA SHRUBLAND	ATCO/TEGL	158
G4		(BALSAMORHIZA SERRATA)-POA SECUNDA HERBACEOUS VEGETATION	(BASE2)-POSE	390
G4		BETULA GLANDULOSA/CAREX ROSTRATA SHRUBLAND	BEGL/CARO6	195
G3		BETULA OCCIDENTALIS SHRUBLAND	BEOC2	195,276
G3		BETULA OCCIDENTALIS/CORNUS SERICEA SHRUBLAND	BEOC2/COSE16	155,194,376,380,525
G2		BETULA OCCIDENTALIS/CRATAEGUS DOUGLASII SHRUBLAND	BEOC2/CRDO2	371
G2G3		BETULA OCCIDENTALIS/MESIC FORB SHRUBLAND	BEOC2/MESIC FORB	380
G2		BETULA OCCIDENTALIS/POPULUS TRICHOCARPA/SALIX SPP. SHRUBLAND	BEOC2/POTR15/SALIX	155,312
G4Q		CALAMAGROSTIS CANADENSIS HERBACEOUS VEGETATION	CACA4	96,97,184,194,195,283,326,327, 359,360,362,380,515

G2		CALAMAGROSTIS PURPURASCENS HERBACEOUS VEGETATION	CAPU	143
G4		CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	CALE4	154,376,380
G2		CAREX APERTA HERBACEOUS VEGETATION	CAAP3	195
G5		CAREX AQUATILIS HERBACEOUS VEGETATION	CAAQ	19,22,24,31,55,66,112,179,189,195,199,222, 255,256,257,258,276,283,298,326,367,376, 377,380,396,398,409,453,473,474,522,525
G4		CAREX BREWERI HERBACEOUS VEGETATION	CABR12	143
G3		CAREX BUXBAUMII HERBACEOUS VEGETATION	CABU6	194,326,380,387,388
G4		CAREX DOUGLASII HERBACEOUS VEGETATION	CADO2	310
G4		CAREX ELYNOIDES HERBACEOUS VEGETATION	CAEL3	16,17,102,340
G3		CAREX ELYNOIDES-LUPINUS ARGENTEUS HERBACEOUS VEGETATION	CAEL3-LUAR3	71
G3		CAREX HOODII-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	CAHO5-FEID	462
G3		CAREX HOODII-FESTUCA VIRIDULA HERBACEOUS VEGETATION	CAHO5-FEVI	250
G4		CAREX LANUGINOSA HERBACEOUS VEGETATION	CALA30	199,291,376,380
G4		CAREX LASIOCARPA HERBACEOUS VEGETATION	CALA11	194,195,291,380
G3		CAREX LIMOSA HERBACEOUS VEGETATION	CALI7	194,195,380
G4		CAREX MICROPTERA HERBACEOUS VEGETATION	CAMI7	199,376,380,522,525
G4		CAREX NEBRASCENSIS HERBACEOUS VEGETATION	CANE2	185,195,199,291,362,376,380,522,525
G4		CAREX NIGRICANS HERBACEOUS VEGETATION	CANI2	1,102,143,191,209,211
G2G3		CAREX PRAEGRACILIS-CAREX AQUATILIS HERBACEOUS VEGETATION	CAPR5-CAAQ	60
G3		CAREX PSEUDOSCIRPOIDEA HERBACEOUS VEGETATION	CAPS2	143
G5		CAREX ROSTRATA HERBACEOUS VEGETATION	CARO6	9,17,30,172,195,199,222,274,276,291,303, 326,359,360,361,362,363,365,367,376,379, 380,396,400,421,432,473,474,522,525
G4		CAREX RUPESTRIS VAR. DRUMMONDIANA HERBACEOUS VEGETATION	CARUD	16,17
G3		CAREX SCIRPOIDEA-GEUM ROSSII HERBACEOUS VEGETATION	CASC10-GERO2	102
G2		CAREX SCIRPOIDEA-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION	CASC10-PODI2	102
G4		CAREX SCOPULORUM HERBACEOUS VEGETATION	CASC12	195,312
G4		CAREX SCOPULORUM-CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	CASC12-CALE4	91,102,221,222,262,285,329,374,425,505,506
G3		CAREX SIMULATA HERBACEOUS VEGETATION	CASI2	195,199,291,365,376,380,474,522
G4		CAREX SPECTABILIS HERBACEOUS VEGETATION	CASP5	143
G2		CAREX STENOPHYLLA-POA SECUNDA SPARSE SHRUBLAND	CAST40-POSE	82
G5		CASSIOPE MERTENSIANA-PHYLLODOCE EMPETRIFORMIS DWARF-SHRUBLAND	CAME7-PHEM	133,191
G3		CELTIS LAEVIGATA VAR. RETICULATA/PSEUDOROEGNERIA SPICATA SHRUBLAND	CELAR/PSSP6	462
G4		CERCOCARPUS LEDIFOLIUS/ARTEMISIA TRIDENTATA SHRUBLAND	CELE3/ARTR2	28,40,205
G2	Y	CERCOCARPUS LEDIFOLIUS/CALAMAGROSTIS RUBESCENS SHRUBLAND	CELE3/CARU	131
G2		CERCOCARPUS LEDIFOLIUS/FESTUCA IDAHOENSIS SHRUBLAND	CELE3/FEID	127,131,185
G1	Y	CERCOCARPUS LEDIFOLIUS/HOLODISCUS DUMOSUS SHRUBLAND	CELE3/HODU	349
G2	Y	CERCOCARPUS LEDIFOLIUS/LEYMUS AMBIGUUS SHRUBLAND	CELE3/LEAM	349
G4		CERCOCARPUS LEDIFOLIUS/PRUNUS VIRGINIANA SHRUBLAND	CELE3/PRVI	300
G5		CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA SHRUBLAND	CELE3/PSSP6	22,24,281,300,333,354,354,462
G2		CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SHRUBLAND	CELE3/PSSP6-FEID	131
G2		CERCOCARPUS LEDIFOLIUS/SYMPHORICARPOS OREOPHILUS SHRUBLAND	CELE3/SYOR2	131
G1	Y	CHRYSOTHAMNUS NAUSEOSUS/LEYMUS FLAVESCENS/PSORALIDIUM LANCEOLATUM SHRUBLAND	CHNA2/LEFL4/PSLA3	84
G4		CORNUS SERICEA SHRUBLAND	COSE16	195
G3		CORNUS SERICEA/GALIUM TRIFLORUM SHRUBLAND	COSE16/GATR3	363,367,522
G3		CORNUS SERICEA/HERACLEUM LANATUM SHRUBLAND	COSE16/HELA4	376,380,474,522
G2		CRATAEGUS DOUGLASII SHRUBLAND	CRDO2	146
G2	Y	CRATAEGUS DOUGLASII/HERACLEUM LANATUM SHRUBLAND	CRDO2/HELA4	121
G2	Y	CRATAEGUS DOUGLASII/ROSA WOODSII SHRUBLAND	CRDO2/ROWO	291,371
G3		CRATAEGUS DOUGLASII/SYMPHORICARPOS ALBUS SHRUBLAND	CRDO2/SYAL	121
G1	Y	DANTHONIA CALIFORNICA (VALLEY GRASSLAND) HERBACEOUS VEGETATION	DACA3 (VALLEY GRASSLAND)	95,247,265,339
G2G3		DANTHONIA INTERMEDIA HERBACEOUS VEGETATION	DAIN	143,189,222,283,287,380
G3		DANTHONIA UNISPICATA-POA SECUNDA HERBACEOUS VEGETATION	DAUN-POSE	178,250

G4		DESCHAMPSIA CESPITOSA HERBACEOUS VEGETATION	DECE	46,55,122,172,185,189,191,195,199,222 199,222,250,251,291,362,376,456,474,522,525
G4		DESCHAMPSIA CESPITOSA-CALTHA LEPTOSEPALA HERBACEOUS VEGETATION	DECE-CALE4	45,46,102,221,222,254,262,285,329,373,515
G4		DESCHAMPSIA CESPITOSA-CAREX SPP. HERBACEOUS VEGETATION	DECE-CAREX	354
G3G5		DISTICHLIS SPICATA HERBACEOUS VEGETATION	DISP	28,58,67,109,113,117,121,172,181, 195,240,279,372,394,399,413, 414,433,442,474,479,486,494
G4		DISTICHLIS SPICATA-(SCIRPUS NEVADENSIS) HERBACEOUS VEGETATION	DISP-(SCNE)	106,121,183,419
G3?		DRYAS OCTOPETALA HERBACEOUS VEGETATION	DROC	143
G4		DRYAS OCTOPETALA-CAREX RUPESTRIS HERBACEOUS VEGETATION	DROC-CARU3	102,112,151,176,221,222,231,232, 233,262,275,283,496,506,507
G5	Y	ELEOCHARIS PALUSTRIS HERBACEOUS VEGETATION	ELPA3	22,24,60,67,153,165,195,199,276,291, 360,361,376,380,396,399,442,446,522
G2G4		ELEOCHARIS PALUSTRIS-DISTICHLIS SPICATA HERBACEOUS VEGETATION	ELPA3-DISP	58
G2G4		ELEOCHARIS PALUSTRIS-JUNCUS BALTICUS HERBACEOUS VEGETATION	ELPA3-JUBA	436
G4		ELEOCHARIS QUINQUEFLORA HERBACEOUS VEGETATION	ELQU2	55,194,245,283,291,326,380,515
G2		ELYMUS GLAUCUS HERBACEOUS VEGETATION	ELGL	407
G4		EQUISETUM FLUVIATILE HERBACEOUS VEGETATION	EQFL	195
G3		ERIOGONUM COMPOSITUM-POA SECUNDA HERBACEOUS VEGETATION	ERCO12-POSE	121
G3		ERIOGONUM DOUGLASII-POA SECUNDA HERBACEOUS VEGETATION	ERDO-POSE	121,250,251
G3		ERIOGONUM MICROTHECUM-PHYSARIA OREGONA SPARSE SHRUBLAND	ERMI4-PHOR2	121,250,251
G3		ERIOGONUM NIVEUM-POA SECUNDA HERBACEOUS VEGETATION	ERNI2-POSE	121
G1	Y	ERIOGONUM OVALIFOLIUM VAR. DEPRESSUM DWARF-SHRUBLAND	EROVD	124,125
G3		ERIOGONUM SPHAEROCEPHALUM-POA SECUNDA DWARF-SHRUBLAND	ERSP7-POSE	121
G3		ERIOGONUM SPHAEROCEPHALUM-POA SECUNDA HERBACEOUS VEGETATION	ERSP7-POSE	121
G4		ERIOGONUM STRICTUM-POA SECUNDA HERBACEOUS VEGETATION	ERST4-POSE	121,251,390
G3		ERIOGONUM THYMOIDES-POA SECUNDA DWARF-SHRUBLAND	ERTH4-POSE	121
G3		ERIOGONUM THYMOIDES-POA SECUNDA HERBACEOUS VEGETATION	ERTH4-POSE	121
G3		FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FEID	19,254
G3		FESTUCA IDAHOENSIS-CAREX FILIFOLIA HERBACEOUS VEGETATION	FEID-CAFI	354
G3G4?		FESTUCA IDAHOENSIS-CAREX HOODII HERBACEOUS VEGETATION	FEID-CAHO5	299
G2	Y	FESTUCA IDAHOENSIS-CAREX SCIRPOIDEA HERBACEOUS VEGETATION	FEID-CASC10	354
G4		FESTUCA IDAHOENSIS-DESCHAMPSIA CESPITOSA HERBACEOUS VEGETATION	FEID-DECE	354
G4		FESTUCA IDAHOENSIS-ELYMUS TRACHYCAULUS HERBACEOUS VEGETATION	FEID-ELTR7	222,262,354
G2		FESTUCA IDAHOENSIS-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	FEID-ERCA8	71
G2	Y	FESTUCA IDAHOENSIS-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	FEID-ERHE2	121,331,460,461
G2?		FESTUCA IDAHOENSIS-FESTUCA KINGII HERBACEOUS VEGETATION	FEID-FEKI2	344
G2	Y	FESTUCA IDAHOENSIS-HIERACIUM CYNOGLOSSOIDES HERBACEOUS VEGETATION	FEID-HICY	121
G3		FESTUCA IDAHOENSIS-KOELERIA MACRANTHA HERBACEOUS VEGETATION	FEID-KOMA	250,251,390,462
G3		FESTUCA IDAHOENSIS-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION	FEID-PODI2	102
G4		FESTUCA IDAHOENSIS-PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	FEID-PSSP6	354,462
G3		FESTUCA IDAHOENSIS-STIPA RICHARDSONII HERBACEOUS VEGETATION	FEID-STRI2	354
G2	Y	FESTUCA IDAHOENSIS-SYMPHORICARPOS ALBUS SPARSE SHRUBLAND	FEID-SYAL	121,251,462
G3		FESTUCA KINGII HERBACEOUS VEGETATION	FEKI2	344
G3		FESTUCA KINGII-CAREX ELYNOIDES HERBACEOUS VEGETATION	FEKI2-CAEL3	348
G3		FESTUCA KINGII-PHLOX PULVINATA HERBACEOUS VEGETATION	FEKI2-PHPU5	348
G3		FESTUCA KINGII-POA CUSICKII HERBACEOUS VEGETATION	FEKI2-POCU3	348
G4		FESTUCA OVINA HERBACEOUS VEGETATION	FEOV	189
G4		FESTUCA SCABRELLA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FESC-FEID	121,226,331,354,460,461,463
G4		FESTUCA SCABRELLA-PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	FESC-PSSP6	354
G2	Y	FESTUCA VIRIDULA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FEVI-FEID	250
G3		FESTUCA VIRIDULA-LUPINUS ARGENTEUS SSP. ARGENTEUS VAR. LAXIFLORUS HERBACEOUS VEGETATION	FEVI-LUARL5	250
G4G5		GEUM ROSSII HERBACEOUS VEGETATION	GERO2	298,304

G5		GLOSSOPETALON NEVADENSE/PSEUDOROEGNERIA SPICATA SHRUBLAND	GLNE3/PSSP6	250
G3		GLYCERIA BOREALIS HERBACEOUS VEGETATION	GLBO	195
G5		GRAYIA SPINOSA-EPHEDRA VIRIDIS SHRUBLAND	GRSP-EPVI	292
G4		GRAYIA SPINOSA-PRUNUS ANDERSONII SHRUBLAND	GRSP-PRAN2	394
G4		GRAYIA SPINOSA/ARTEMISIA NOVA/STIPA SPECIOSA SHRUBLAND	GRSP/ARNO4/STSP3	40
G5		GRAYIA SPINOSA/ARTEMISIA SPINESCENS SHRUBLAND	GRSP/ARSP5	38,40
G5		GRAYIA SPINOSA/LYCIUM ANDERSONII SHRUBLAND	GRSP/LYAN	28,382,406,435,495
G4		GRAYIA SPINOSA/ORYZOPSIS HYMENOIDES SHRUBLAND	GRSP/ORHY	36
G?		GRAYIA SPINOSA/POA SECUNDA SHRUBLAND	GRSP/POSE	121
G2		IVESIA GORDONII-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	IVGO-ERCA8	71
G2		IVESIA GORDONII-MINUARTIA OBTUSILOBA HERBACEOUS VEGETATION	IVGO-MIOB2	71
G5		JUNCUS BALTICUS HERBACEOUS VEGETATION	JUBA	60,67,165,194,195,221,285,310,361,363, 370,379,380,402,436,446,474,493,522
G2G4		JUNCUS BALTICUS-CAREX ROSSII HERBACEOUS VEGETATION	JUBA-CARO5	411
G4		JUNCUS DRUMMONDII-CAREX SPP. HERBACEOUS VEGETATION	JUDR-CAREX	29,262,283,288,316,369,374,425,441,506,507
G3		JUNIPERUS OCCIDENTALIS-PINUS PONDEROSA/ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-(FESTUCA IDAHOENSIS-STIPA SPP.) SPARSE WOODLAND	JUOC-PIPO/ARTR2/PSSP6-(FEID-STIPA)	188
G3		JUNIPERUS OCCIDENTALIS-PINUS PONDEROSA/PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC-PIPO/PUTR2/(PSSP6)-FEID	15
G2		JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/DANTHONIA UNISPICATA-POA SECUNDA SPARSE WOODLAND	JUOC/ARAR8/DAUN-POSE	188
G3		JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARAR8/FEID	150,185,188,235
G4		JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/ARAR8/PSSP6	150,185,188,235
G2		JUNIPERUS OCCIDENTALIS/ARTEMISIA RIGIDA/POA SECUNDA SPARSE WOODLAND	JUOC/ARRI2/POSE	185,188
G4		JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA SSP. VASEYANA WOODLAND	JUOC/ARTRV	68,69,253
G3		JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARTR2-PUTR2/PSSP6-FEID	144,145,429,487
G1	Y	JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/CAREX FILIFOLIA SPARSE WOODLAND	JUOC/ARTR2/CAFI	173
G3		JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/ARTR2/FEID	144,150,185,188,235
G3		JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/ARTR2/PSSP6	132,144,150,185,235
G2		JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS-SYMPHORICARPOS OREOPHILUS WOODLAND	JUOC/CELE3-SYOR2	131
G2	Y	JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/CAREX GEYERI WOODLAND	JUOC/CELE3/CAGE2	253
G4		JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND	JUOC/CELE3/PSSP6	253
G2?		JUNIPERUS OCCIDENTALIS/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/FEID	144,185,343
GU		JUNIPERUS OCCIDENTALIS/POA SECUNDA-STIPA OCCIDENTALIS SPARSE WOODLAND	JUOC/POSE-STOC2	107,268
G3		JUNIPERUS OCCIDENTALIS/PSEUDOROEGNERIA SPICATA SPARSE WOODLAND	JUOC/PSSP6	144,185,250,517
G5		JUNIPERUS OSTEOSPERMA WOODLAND	JUOS	38,43,44
G5		JUNIPERUS OSTEOSPERMA/ARTEMISIA NOVA WOODLAND	JUOS/ARNO4	38,43,44,74
G5		JUNIPERUS OSTEOSPERMA/ARTEMISIA NOVA/ROCK WOODLAND	JUOS/ARNO4/ROCK	38
G5Q		JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA WOODLAND	JUOS/ARTR2	36,38,41,43,44,50,63,118,140,242, 295,297,336,342,478
G4G5		JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA/ORYZOPSIS HYMENOIDES WOODLAND	JUOS/ARTR2/ORHY	41
G?Q		JUNIPERUS OSTEOSPERMA/BARREN WOODLAND	JUOS/BARREN	336
G1	Y	JUNIPERUS OSTEOSPERMA/LEYMUS AMBIGUUS SPARSE WOODLAND	JUOS/LEAM	74
G4		JUNIPERUS OSTEOSPERMA/PSEUDOROEGNERIA SPICATA WOODLAND	JUOS/PSSP6	19,22,134,262,264,281,297,323,503,504
G1	Y	JUNIPERUS OSTEOSPERMA/PURSHIA TRIDENTATA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA WOODLAND	JUOS/PUTR2-SYOR2/PSSP6	260,278
G1	Y	JUNIPERUS OSTEOSPERMA/STIPA COMATA SPARSE WOODLAND	JUOS/STCO4	74
G4		JUNIPERUS SCOPULORUM/CORNUS SERICEA WOODLAND	JUSC2/COSE16	195
G4		JUNIPERUS SCOPULORUM/PSEUDOROEGNERIA SPICATA WOODLAND	JUSC2/PSSP6	32,64,168,197,198,262,448,453,458
G3		KALMIA MICROPHYLLA/CAREX SCOPULORUM DWARF-SHRUBLAND	KAMI/CASC12	195
G5		KRASCHENINNIKOVIA LANATA SHRUBLAND	KRLA2	157,337

G3		KRASCHENINNIKOVIA LANATA/POA SECUNDA SHRUBLAND	KRLA2/POSE	121
G4		LARIX LYALLII-ABIES LASIOCARPA FOREST	LALY-ABLA	385
G3		LARIX LYALLII/LUZULA GLABRATA VAR. HITCHCOCKII WOODLAND	LALY/LUGLH	514
G3		LARIX LYALLII/VACCINIUM DELICIOSUM WOODLAND	LALY/VADE	514
G2	Y	LEYMUS AMBIGUUS-ENCELIOPSIS NUDICAULIS HERBACEOUS VEGETATION	LEAM-ENNU	349
G2	Y	LEYMUS AMBIGUUS-LUPINUS ARGENTEUS HERBACEOUS VEGETATION	LEAM-LUAR3	349
G1		LEYMUS CINEREUS (BOTTOMLANDS) HERBACEOUS VEGETATION	LECI4 (BOTTOMLANDS)	106,121,251,390,431
G3		LEYMUS CINEREUS HERBACEOUS VEGETATION	LECI4	127,250
G2	Y	LEYMUS FLAVESCENS SPARSE VEGETATION	LEFL4	84
G4?		LEYMUS TRITICOIDES-CAREX SPP. HERBACEOUS VEGETATION	LETR5-CAREX	40
G2		LEYMUS TRITICOIDES-POA SECUNDA HERBACEOUS VEGETATION	LETR5-POSE	149
G4		LOMATIUM COUS-POA SECUNDA HERBACEOUS VEGETATION	LOCO4-POSE	517
G4		MERTENSIA CILIATA HERBACEOUS VEGETATION	MECI3	283,380
G4		NUPHAR LUTEA SSP. POLYSEPALA HERBACEOUS VEGETATION	NULUP	321,400
G3G5		PASCOPYRUM SMITHII HERBACEOUS VEGETATION	PASM	22,24,67,86,195,317,395,397,399,433,479
G4		PENTAPHYLLOIDES FLORIBUNDA/DESCHAMPSIA CESPITOSA SHRUBLAND	PEFL15/DECE	195,363,376,380,522,525
G4		PENTAPHYLLOIDES FLORIBUNDA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PEFL15/FEID	327,354,476,522
G4		PENTAPHYLLOIDES FLORIBUNDA/FESTUCA SCABRELLA SPARSE SHRUBLAND	PEFL15/FESC	354
G4		PHALARIS ARUNDINACEA HERBACEOUS VEGETATION	PHAR3	195
G3	Y	PHRAGMITES AUSTRALIS HERBACEOUS VEGETATION	PHAU7	195
G3		PHYLLODOCE EMPETRIFORMIS/ANTENNARIA LANATA DWARF-SHRUBLAND	PHEM/ANLA3	102
G3		PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND	PHMA5-SYAL	250
G2		PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND	PHMA5-SYAL	250
G5		PICEA ENGELMANNII/ARNICA CORDIFOLIA FOREST	PIEN/ARCO9	444
G3		PICEA ENGELMANNII/CALAMAGROSTIS CANADENSIS FOREST	PIEN/CACA4	529
G4	Y	PICEA ENGELMANNII/CALTHA LEPTOSEPALA FOREST	PIEN/CALE4	262,328,444
G2		PICEA ENGELMANNII/CAREX DISPERMA FOREST	PIEN/CADI6	262,443,444
G3		PICEA ENGELMANNII/CLINTONIA UNIFLORA FOREST	PIEN/CLUN2	291
G3		PICEA ENGELMANNII/CORNUS SERICEA WOODLAND	PIEN/COSE16	529
G4G5		PICEA ENGELMANNII/EQUISETUM ARVENSE FOREST	PIEN/EQAR	96,97,101,262,291,328,380,381, 385,443,444,508,509,513,514,524
G4		PICEA ENGELMANNII/GALIUM TRIFLORUM FOREST	PIEN/GATR3	101,443,444,522
G2		PICEA ENGELMANNII/HYPNUM REVOLUTUM FOREST	PIEN/HYRE70	262,443,444
G4		PICEA ENGELMANNII/JUNIPERUS COMMUNIS FOREST	PIEN/JUCO6	262,444
G3		PICEA ENGELMANNII/LINNAEA BOREALIS FOREST	PIEN/LIBO3	101,262,444
G2		PICEA ENGELMANNII/PHYSOCARPUS MALVACEUS FOREST	PIEN/PHMA5	262,444
G5		PICEA ENGELMANNII/RIBES MONTIGENUM FOREST	PIEN/RIMO2	34,295,383,444,493,523
G3		PICEA ENGELMANNII/SENECIO TRIANGULARIS FOREST	PIEN/SETR	93
G4G5		PICEA ENGELMANNII/VACCINIUM CESPITOSUM FOREST	PIEN/VACE	328,385
G4G5		PICEA ENGELMANNII/VACCINIUM SCOPARIUM FOREST	PIEN/VASC	230,262,328,404,444,453
G1		PICEA SPP./CAREX DISPERMA FOREST	PICEA/CADI6	444
G4		PICEA SPP./CLINTONIA UNIFLORA FOREST	PICEA/CLUN2	385
G3		PICEA SPP./CORNUS SERICEA FOREST	PICEA/COSE16	195
G4		PICEA SPP./EQUISETUM ARVENSE FOREST	PICEA/EQAR	385
G4		PICEA SPP./GALIUM TRIFLORUM FOREST	PICEA/GATR3	385
G4		PICEA SPP./LINNAEA BOREALIS FOREST	PICEA/LIBO3	385
G2	Y	PICEA SPP./LYSICHITON AMERICANUS FOREST	PICEA/LYAM3	195
G4		PICEA SPP./MAIANTHEMUM STELLATUM FOREST	PICEA/MAST4	385
G3		PICEA SPP./PHYSOCARPUS MALVACEUS FOREST	PICEA/PHMA5	385
G4		PICEA SPP./SENECIO STREPTANTHIFOLIUS FOREST	PICEA/SEST3	385
G4		PICEA SPP./VACCINIUM CESPITOSUM FOREST	PICEA/VACE	385
G5		PINUS ALBICAULIS FOREST	PIAL	385
G5		PINUS ALBICAULIS-ABIES LASIOCARPA FOREST	PIAL-ABLA	385
G3		PINUS ALBICAULIS-PINUS CONTORTA/PENSTEMON LAETUS FOREST	PIAL-PICO/PELA7	235

G3		PINUS ALBICAULIS/CALAMAGROSTIS RUBESCENS WOODLAND	PIAL/CARU	508,509,513,514
G4		PINUS ALBICAULIS/CAREX GEYERI WOODLAND	PIAL/CAGE2	101,185,262,444
G4		PINUS ALBICAULIS/CAREX ROSSII FOREST	PIAL/CARO5	262,403,444
G4		PINUS ALBICAULIS/FESTUCA IDAHOENSIS WOODLAND	PIAL/FEID	262,344,444
G4		PINUS ALBICAULIS/JUNIPERUS COMMUNIS WOODLAND	PIAL/JUCO6	262,403,444
G4		PINUS ALBICAULIS/LUZULA GLABRATA VAR. HITCHCOCKII WOODLAND	PIAL/LUGLH	514
G4		PINUS ALBICAULIS/VACCINIUM SCOPARIUM FOREST	PIAL/VASC	101,262,403,444,453
G2		PINUS CONTORTA-(POPULUS TREMULOIDES)/SPIRAEA DOUGLASII/CAREX SPP. FOREST	PICO-(POTR5)/SPDO/CAREX	291
G3		PINUS CONTORTA-(POPULUS TREMULOIDES)/VACCINIUM ULIGINOSUM FOREST	PICO-(POTR5)/VAUL	291
G3		PINUS CONTORTA/ARCTOSTAPHYLOS NEVADENSIS FOREST	PICO/ARNE	13,324
G5		PINUS CONTORTA/ARCTOSTAPHYLOS UVA-URSI FOREST	PICO/ARUV	135,142,171,230,262,328,383,453,487
G4		PINUS CONTORTA/ARNICA CORDIFOLIA FOREST	PICO/ARCO9	262,444
G3		PINUS CONTORTA/ARTEMISIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PICO/ARTR2/FEID	487
G3		PINUS CONTORTA/ARTEMISIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PICO/ARTR2/STOC2	487
G5		PINUS CONTORTA/CALAMAGROSTIS RUBESCENS FOREST	PICO/CARU	236,375,385,444,463
G5		PINUS CONTORTA/CAREX GEYERI FOREST	PICO/CAGE2	2,6,221,222,223,262,286,338,443,444,445,493
G4		PINUS CONTORTA/CAREX PENSYLVANICA FOREST	PICO/CAPE6	487
G5		PINUS CONTORTA/CAREX ROSSII FOREST	PICO/CARO5	6,328,444
G4		PINUS CONTORTA/CAREX SPP. FOREST	PICO/CAREX	291
G4		PINUS CONTORTA/CEANOTHUS VELUTINUS FOREST	PICO/CEVE	426,487
G2		PINUS CONTORTA/ELYMUS GLAUCUS FOREST	PICO/ELGL	185
G3		PINUS CONTORTA/FESTUCA IDAHOENSIS FOREST	PICO/FEID	130,443
G5		PINUS CONTORTA/JUNIPERUS COMMUNIS WOODLAND	PICO/JUCO6	2,6,221,222,223,262,286,320,328 338,381,410,443,444,493
G3		PINUS CONTORTA/PURSHIA TRIDENTATA WOODLAND	PICO/PUTR2	385
G4		PINUS CONTORTA/PURSHIA TRIDENTATA-RIBES CEREUM FOREST	PICO/PUTR2-RICE	487
G4		PINUS CONTORTA/PURSHIA TRIDENTATA/CAREX PENSYLVANICA FOREST	PICO/PUTR2/CAPE6	487
G3		PINUS CONTORTA/PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PICO/PUTR2/FEID	487
G3		PINUS CONTORTA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PICO/PUTR2/STOC2	487
G3G4		PINUS CONTORTA/SPIRAEA BETULIFOLIA FOREST	PICO/SPBE2	444
G3		PINUS CONTORTA/STIPA OCCIDENTALIS FOREST	PICO/STOC2	487
G5		PINUS CONTORTA/VACCINIUM CESPITOSUM FOREST	PICO/VACE	98,328,385,443
G3G5		PINUS CONTORTA/VACCINIUM GLOBULARE FOREST	PICO/VAGL	444
G5		PINUS CONTORTA/VACCINIUM SCOPARIUM FOREST	PICO/VASC	6,98,185,202,221,223,230,236,252, 262,286,320,328,375,385,415, 443,444,444,445,453,483,487,493
G3		PINUS CONTORTA/VACCINIUM SCOPARIUM/CAREX PENSYLVANICA FOREST	PICO/VASC/CAPE6	185,487
G5		PINUS CONTORTA/XEROPHYLLUM TENAX FOREST	PICO/XETE	11,98,487
G3G4		PINUS FLEXILIS/CERCOCARPUS LEDIFOLIUS WOODLAND	PIFL2/CELE3	127,328,443,444
G5		PINUS FLEXILIS/FESTUCA IDAHOENSIS WOODLAND	PIFL2/FEID	262,385,443,444
G4		PINUS FLEXILIS/FESTUCA KINGII WOODLAND	PIFL2/FEKI2	6,101,262,264,443,444,453
G5		PINUS FLEXILIS/JUNIPERUS COMMUNIS WOODLAND	PIFL2/JUCO6	6,93,221,223,227,262,263,385,443,444,493
G3?		PINUS FLEXILIS/MAHONIA REPENS WOODLAND	PIFL2/MARE11	328
G1Q		PINUS FLEXILIS/PENTAPHYLLOIDES FLORIBUNDA/DISTICHLIS STRICTA WOODLAND	PIFL2/PEFL15/DIST3	242
G4		PINUS FLEXILIS/PSEUDOROEGNERIA SPICATA WOODLAND	PIFL2/PSSP6	385
G1	Y	PINUS FLEXILIS/PURSHIA TRIDENTATA WOODLAND	PIFL2/PUTR2	124,125,152
G5		PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA ARBUSCULA WOODLAND	PIMO-JUOS/ARAR8	39,40
G1	Y	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/ARTRV/PSSP6	72,73
G5		PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA WOODLAND	PIMO-JUOS/ARTR2	39,40,44,290
G1	Y	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/CELE3/PSSP6	72
G1	Y	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/LEYMUS CINEREUS WOODLAND	PIMO-JUOS/LECI4	72
G1	Y	PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/PRUNUS VIRGINIANA WOODLAND	PIMO-JUOS/PRVI	72

G5		PINUS MONOPHYLLA/ARTEMISIA TRIDENTATA WOODLAND	PIMO/ARTR2	28,36,41,292
G5		PINUS MONOPHYLLA/CERCOCARPUS LEDIFOLIUS WOODLAND	PIMO/CELE3	205
GU		PINUS PONDEROSA-POPULUS TREMULOIDES/CAREX SPP.-(POA SPP.) FOREST	PIPO-POTR5/CAREX-(POA)	291
G1	Y	PINUS PONDEROSA-PSEUDOTSUGA MENZIESII WOODLAND	PIPO-PSME	308
G2	Y	PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS NEVADENSIS FOREST	PIPO-PSME/ARNE	12,468
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS PATULA FOREST	PIPO-PSME/ARPA6	12
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PENSTEMON FRUTICOSUS FOREST	PIPO-PSME/PEFR3	514
G3G4		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS FOREST	PIPO-PSME/PHMA5	185
G3		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PSEUDOROEGNERIA SPICATA SSP. INERMIS FOREST	PIPO-PSME/PSSPI	462,508,509,513
G4		PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/PURSHIA TRIDENTATA FOREST	PIPO-PSME/PUTR2	324,508,509,514
G1		PINUS PONDEROSA-QUERCUS GARRYANA/ARCTOSTAPHYLOS VISCIDA/FESTUCA CALIFORNICA WOODLAND	PIPO-QUGA4/ARVI4/FECA	371
G2	Y	PINUS PONDEROSA-QUERCUS GARRYANA/BALSAMORHIZA SAGITTATA WOODLAND	PIPO-QUGA4/BASA3	468
G3		PINUS PONDEROSA-QUERCUS GARRYANA/CAREX GEYERI WOODLAND	PIPO-QUGA4/CAGE2	248
G3		PINUS PONDEROSA-QUERCUS GARRYANA/PURSHIA TRIDENTATA WOODLAND	PIPO-QUGA4/PUTR2	468
G3		PINUS PONDEROSA-QUERCUS GARRYANA/SYMPHORICARPOS ALBUS WOODLAND	PIPO-QUGA4/SYAL	248
G5		PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA WOODLAND	PIPO/ARPA6	182,262,411,523
G3		PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA-PURSHIA TRIDENTATA FOREST	PIPO/ARPA6-PUTR2	147,487
G2		PINUS PONDEROSA/ARTEMISIA TRIDENTATA SSP. VASEYANA/POA NERVOSA FOREST	PIPO/ARTRV/PONE2	235
G3		PINUS PONDEROSA/ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA FOREST	PIPO/ARTR2-PUTR2	487
G1		PINUS PONDEROSA/ARTEMISIA TRIDENTATA/STIPA SPP. FOREST	PIPO/ARTR2/STIPA	235
G1	Y	PINUS PONDEROSA/ASPIDOTIS DENSA WOODLAND	PIPO/ASDE6	514
G2	Y	PINUS PONDEROSA/CALAMAGROSTIS RUBESCENS FOREST	PIPO/CARU	122,172,185,417,423,457
G4		PINUS PONDEROSA/CAREX GEYERI FOREST	PIPO/CAGE2	6,49,262,328,453,520
G4		PINUS PONDEROSA/CEANOTHUS VELUTINUS-PURSHIA TRIDENTATA FOREST	PIPO/CEVE-PUTR2	147,487
G4		PINUS PONDEROSA/CERCOCARPUS LEDIFOLIUS WOODLAND	PIPO/CELE3	523
G3		PINUS PONDEROSA/CORNUS SERICEA WOODLAND	PIPO/COSE16	195
G1	Y	PINUS PONDEROSA/CRATAEGUS DOUGLASII WOODLAND	PIPO/CRDO2	270,371
G2		PINUS PONDEROSA/ELYMUS GLAUCUS FOREST	PIPO/ELGL	185,203
G5		PINUS PONDEROSA/FESTUCA IDAHOENSIS WOODLAND	PIPO/FEID	90,98,100,110,110,116,119,122, 178,185,187,230,250,262,286,328, 331,384,385,443,453,463,528
G3G4		PINUS PONDEROSA/FESTUCA SCABRELLA FOREST	PIPO/FESC	331,344,492
G2		PINUS PONDEROSA/PHYSOCARPUS MALVACEUS FOREST	PIPO/PHMA5	98,103,119,122,172,185,331,443,492,509
G4		PINUS PONDEROSA/PRUNUS VIRGINIANA FOREST	PIPO/PRVI	198,229,385
G4		PINUS PONDEROSA/PSEUDOROEGNERIA SPICATA WOODLAND	PIPO/PSSP6	90,98,119,121,122,185,198,230,250, 251,331,385,443,453,462,508,509,528
G5		PINUS PONDEROSA/PURSHIA TRIDENTATA WOODLAND	PIPO/PUTR2	26,54,90,119,122,172,185,221,222,223,250, 262,294,381,385,385,411,416,443,493,509,523
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/CAREX PENSYLVANICA FOREST	PIPO/PUTR2/CAPE6	487
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/CAREX ROSSII FOREST	PIPO/PUTR2/CARO5	185
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS FOREST	PIPO/PUTR2/FEID	130,147,234,235,246,487
G1	Y	PINUS PONDEROSA/PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SPARSE VEGETATION	PIPO/PUTR2/ORHY	90,343
G3		PINUS PONDEROSA/PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA FOREST	PIPO/PUTR2/PSSP6	90,250,487,514
G2		PINUS PONDEROSA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PIPO/PUTR2/STOC2	234,487
G1		PINUS PONDEROSA/STIPA COMATA WOODLAND	PIPO/STCO4	119,122,172,443,528
G5		PINUS PONDEROSA/SYMPHORICARPOS ALBUS FOREST	PIPO/SYAL	90,98,119,122,229,250,262,307, 331,385,443,453,454,463,528
G4		PINUS PONDEROSA/SYMPHORICARPOS OREOPHILUS FOREST	PIPO/SYOR2	309,443,523
G2		PINUS PONDEROSA/WYETHIA MOLLIS FOREST	PIPO/WYMO	235
G2		POA CUSICKII HERBACEOUS VEGETATION	POCU3	291
G4?		POA NEVADENSIS HERBACEOUS VEGETATION	PONE3	42,310
G1	Y	POA NEVADENSIS-PUCCINELLIA LEMMONII-ELYMUS ELYMOIDES HERBACEOUS VEGETATION	PONE3-PULE-ELEL5	47,267

G4		POA PALUSTRIS HERBACEOUS VEGETATION	POPA2	195
G2G3		POPULUS ANGUSTIFOLIA/ACER GRANDIDENTATUM FOREST	POAN3/ACGR3	380
G3		POPULUS ANGUSTIFOLIA/BETULA OCCIDENTALIS FOREST	POAN3/BEOC2	285,370,376,380
G4		POPULUS ANGUSTIFOLIA/CORNUS SERICEA FOREST	POAN3/COSE16	195,262,356,376,380,522,525
G3?		POPULUS FREMONTII/SALIX GEYERIANA WOODLAND	POFR2/SAGE2	40
G4G5		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS FOREST	POTR5/AMAL2-SYOR2/BRCA5	351
G4		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/CALAMAGROSTIS RUBESCENS FOREST	POTR5/AMAL2-SYOR2/CARU	228,351,352,353,524
G5		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/TALL FORB FOREST	POTR5/AMAL2-SYOR2/TALL FORB	351,353
G4G5		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA-SYMPHORICARPOS OREOPHILUS/THALICTRUM FENDLERI FOREST	POTR5/AMAL2-SYOR2/THFE	22,263,289,351,524
G4G5		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA/TALL FORB FOREST	POTR5/AMAL2/TALL FORB	351,352,353
G4?		POPULUS TREMULOIDES/AMELANCHIER ALNIFOLIA/THALICTRUM FENDLERI FOREST	POTR5/AMAL2/THFE	351,352,353,524
G4?		POPULUS TREMULOIDES/ARTEMISIA TRIDENTATA FOREST	POTR5/ARTR2	40,262,351,524
G5		POPULUS TREMULOIDES/BROMUS CARINATUS FOREST	POTR5/BRCA5	351,353
G3		POPULUS TREMULOIDES/CALAMAGROSTIS CANADENSIS FOREST	POTR5/CACA4	195,361,391
G5		POPULUS TREMULOIDES/CALAMAGROSTIS RUBESCENS FOREST	POTR5/CARU	6,14,99,351,352,353,508,524
G2		POPULUS TREMULOIDES/CAREX SPP. FOREST	POTR5/CAREX	291,378
G3		POPULUS TREMULOIDES/CORNUS SERICEA FOREST	POTR5/COSE16	155,195,492
G4G5		POPULUS TREMULOIDES/JUNIPERUS COMMUNIS/CAREX GEYERI FOREST	POTR5/JUCO6/CAGE2	351,353
G3G4		POPULUS TREMULOIDES/JUNIPERUS COMMUNIS/LUPINUS ARGENTEUS FOREST	POTR5/JUCO6/LUAR3	351
G3		POPULUS TREMULOIDES/OSMORHIZA OCCIDENTALIS FOREST	POTR5/OSOC	195
G3		POPULUS TREMULOIDES/PRUNUS VIRGINIANA FOREST	POTR5/PRVI	92,524
G2?		POPULUS TREMULOIDES/RUBUS PARVIFLORUS FOREST	POTR5/RUPA	351
G4		POPULUS TREMULOIDES/SALIX SCOULERIANA FOREST	POTR5/SASC	351
G4		POPULUS TREMULOIDES/SHEPHERDIA CANADENSIS FOREST	POTR5/SHCA	351,391,524
G3G4		POPULUS TREMULOIDES/STIPA COMATA FOREST	POTR5/STCO4	351,353
G3		POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS FOREST	POTR5/SYAL	99,508
G2		POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	POTR5/SYAL/ELGL	291,378
G5		POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/BROMUS CARINATUS FOREST	POTR5/SYOR2/BRCA5	351,353
G5		POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/CALAMAGROSTIS RUBESCENS FOREST	POTR5/SYOR2/CARU	351,353
G3G4		POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/CAREX ROSSII FOREST	POTR5/SYOR2/CARO5	351,353
G5		POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/TALL FORB FOREST	POTR5/SYOR2/TALL FORB	351,353
G5		POPULUS TREMULOIDES/SYMPHORICARPOS OREOPHILUS/THALICTRUM FENDLERI FOREST	POTR5/SYOR2/THFE	351,353,524
G5	Y	POPULUS TREMULOIDES/TALL FORB FOREST	POTR5/TALL FORB	49,65,66,222,227,228,263,272,300,319,344,351,353,391
G5		POPULUS TREMULOIDES/THALICTRUM FENDLERI FOREST	POTR5/THFE	49,65,66,114,221,223,227,228,262,263,272,289,293,351,391
G3		POPULUS TREMULOIDES/WYETHIA AMPLEXICAULIS FOREST	POTR5/WYAM	351,352,524
G?		POPULUS TRICHOCARPA-ALNUS RHOMBIFOLIA FOREST	POTR15-ALRH2	121
G1	Y	POPULUS TRICHOCARPA/CICUTA DOUGLASII FOREST	POTR15/CIDO	121
G4		POPULUS TRICHOCARPA/CORNUS SERICEA FOREST	POTR15/COSE16	195
G1	Y	POPULUS TRICHOCARPA/CRATAEGUS DOUGLASII FOREST	POTR15/CRDO2	269,270
G1		POPULUS TRICHOCARPA/SALIX EXIGUA FOREST	POTR15/SAEX	312,390
G4		PRUNUS VIRGINIANA SHRUBLAND	PRVI	195
G2?		PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	PSSP6	22,23
G2	Y	PSEUDOROEGNERIA SPICATA-ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS HERBACEOUS VEGETATION	PSSP6-ARLO3-SPCR	251
G3		PSEUDOROEGNERIA SPICATA-BALSAMORHIZA SAGITTATA-POA SECUNDA HERBACEOUS VEGETATION	PSSP6-BASA3-POSE	121,178,251,390
G4		PSEUDOROEGNERIA SPICATA-BOUTELOUA GRACILIS HERBACEOUS VEGETATION	PSSP6-BOGR2	27,48,168,354,450,458
G1?		PSEUDOROEGNERIA SPICATA-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	PSSP6-ERHE2	178,251
G3		PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (CANYON) HERBACEOUS VEGETATION	PSSP6-FEID (CANYON)	121,178,251,390,459,462

G1?	Y	PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (PALOUSE) HERBACEOUS VEGETATION	PSSP6-FEID (PALOUSE)	8,121,185,250,253,390,462
G3		PSEUDOROEGNERIA SPICATA-OPUNTIA POLYACANTHA-(POA SECUNDA) HERBACEOUS VEGETATION	PSSP6-OPPO-(POSE)	251,459,462
G4		PSEUDOROEGNERIA SPICATA-PASCOPYRUM SMITHII HERBACEOUS VEGETATION	PSSP6-PASM	198,354
G3		PSEUDOROEGNERIA SPICATA-POA SECUNDA (LITHOSOL) HERBACEOUS VEGETATION	PSSP6-POSE (LITHOSOL)	121,185,250,251,390,462
G4		PSEUDOROEGNERIA SPICATA-POA SECUNDA HERBACEOUS VEGETATION	PSSP6-POSE	8,85,86,121,163,185,250,251,277,354,390,393,453,462,510
G4		PSEUDOROEGNERIA SPICATA-STIPA COMATA HERBACEOUS VEGETATION	PSSP6-STCO4	8,32,121,239,344,354,390,476,510
G3		PSEUDOTSUGA MENZIESII-PINUS PONDEROSA/PENSTEMON FRUTICOSUS WOODLAND	PSME-PIPO/PEFR3	514
G4		PSEUDOTSUGA MENZIESII/ACER GLABRUM FOREST	PSME/ACGL	250,262,328,443,444
G4		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS PATULA FOREST	PSME/ARPA6	182,411,523
G4Q		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS UVA-URSI (CASCADIAN) FOREST	PSME/ARUV (CASCADIAN)	170,174,214,217,508,514
G3		PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS UVA-URSI-PURSHIA TRIDENTATA FOREST	PSME/ARUV-PUTR2	54,443,463,508,514
G4		PSEUDOTSUGA MENZIESII/ARNICA CORDIFOLIA FOREST	PSME/ARCO9	262,385,443,444
G5		PSEUDOTSUGA MENZIESII/CALAMAGROSTIS RUBESCENS FOREST	PSME/CARU	90,93,94,98,119,122,185,236,250,262,328,331,368,385,443,444,453,462,508,509,513,528
G5		PSEUDOTSUGA MENZIESII/CAREX GEYERI FOREST	PSME/CAGE2	49,98,179,221,223,262,289,385,443,468
G4		PSEUDOTSUGA MENZIESII/CERCOCARPUS LEDIFOLIUS WOODLAND	PSME/CELE3	127,328,443,444,523
G3		PSEUDOTSUGA MENZIESII/CORNUS SERICEA WOODLAND	PSME/COSE16	195
G5		PSEUDOTSUGA MENZIESII/FESTUCA IDAHOENSIS WOODLAND	PSME/FEID	262,385,444
G4		PSEUDOTSUGA MENZIESII/FESTUCA KINGII WOODLAND	PSME/FEKI2	444
G3		PSEUDOTSUGA MENZIESII/FESTUCA OCCIDENTALIS FOREST	PSME/FEOC	468
G4		PSEUDOTSUGA MENZIESII/FESTUCA SCABRELLA WOODLAND	PSME/FESC	385
G3		PSEUDOTSUGA MENZIESII/HOLODISCUS DISCOLOR FOREST	PSME/HODI	1,90,142,172,467,468
G5Q		PSEUDOTSUGA MENZIESII/JUNIPERUS COMMUNIS FOREST	PSME/JUCO6	179,262,358,385,443,444,488
G4		PSEUDOTSUGA MENZIESII/LINNAEA BOREALIS FOREST	PSME/LIBO3	385,443
G5		PSEUDOTSUGA MENZIESII/MAHONIA REPENS FOREST	PSME/MARE11	4,5,12,230,261,262,295,328,410,411,443,444,523
G4G5		PSEUDOTSUGA MENZIESII/OSMORHIZA CHILENSIS FOREST	PSME/OSCH	328,443,444
G2G3		PSEUDOTSUGA MENZIESII/PAXISTIMA MYRSINITES FOREST	PSME/PAMY	66,119,222,227,289,463,508
G5		PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS FOREST	PSME/PHMA5	98,101,119,122,185,250,262,328,385,443,444,462,508,509,513,523,528
G4		PSEUDOTSUGA MENZIESII/PHYSOCARPUS MALVACEUS-LINNAEA BOREALIS FOREST	PSME/PHMA5-LIBO3	513
G5		PSEUDOTSUGA MENZIESII/PSEUDOROEGNERIA SPICATA WOODLAND	PSME/PSSP6	93,385
G5		PSEUDOTSUGA MENZIESII/SPIRAEA BETULIFOLIA FOREST	PSME/SPBE2	98,236,250,262,375,385,444,524
G5		PSEUDOTSUGA MENZIESII/SYMPHORICARPOS ALBUS FOREST	PSME/SYAL	98,101,122,166,250,262,385,443,444,462,468,508,509,513,528
G5		PSEUDOTSUGA MENZIESII/SYMPHORICARPOS OREOPHILUS FOREST	PSME/SYOR2	222,250,262,286,328,355,385,404,443,444,508,509,513,523
G5		PSEUDOTSUGA MENZIESII/VACCINIUM CESPITOSUM FOREST	PSME/VACE	98,385,443
G5Q		PSEUDOTSUGA MENZIESII/VACCINIUM GLOBULARE FOREST	PSME/VAGL	98,101,177,262,385,444
G4		PSEUDOTSUGA MENZIESII/VACCINIUM SPP. FOREST	PSME/VACCI	98,122,385,508,509
G3G4		PSOROTHAMNUS POLYDENIUS VAR. POLYDENIUS/ORYZOPSIS HYMENOIDES SHRUBLAND	PSPOP/ORHY	40
G1	Y	PURSHIA TRIDENTATA-CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND	PUTR2-CHNA2	84
G1		PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PUTR2/(PSSP6)-FEID	253
G1		PURSHIA TRIDENTATA/CAREX PENSYLVANICA-STIPA OCCIDENTALIS SPARSE SHRUBLAND	PUTR2/CAPE6-STOC2	487
G5		PURSHIA TRIDENTATA/FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PUTR2/FEID	121,185,250,300,354,476
G3		PURSHIA TRIDENTATA/FESTUCA SCABRELLA SPARSE SHRUBLAND	PUTR2/FESC	354
G1		PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SHRUBLAND	PUTR2/ORHY	120,121,492
G1?		PURSHIA TRIDENTATA/PRUNUS VIRGINIANA SHRUBLAND	PUTR2/PRVI	75
G3		PURSHIA TRIDENTATA/PSEUDOROEGNERIA SPICATA SPARSE SHRUBLAND	PUTR2/PSSP6	121,185,225,250,354
G2	Y	PURSHIA TRIDENTATA/STIPA COMATA SPARSE SHRUBLAND	PUTR2/STCO4	121,390,461
G2	Y	QUERCUS GARRYANA/CAREX GEYERI FOREST	QUGA4/CAGE2	514
G2		QUERCUS GARRYANA/CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS WOODLAND	QUGA4/CECU/FEID	25
G2		QUERCUS GARRYANA/ELYMUS GLAUCUS FOREST	QUGA4/ELGL	248

G1		QUERCUS GARRYANA/FESTUCA IDAHOENSIS FOREST	QUGA4/FEID	248
G?		QUERCUS GARRYANA/PSEUDOROEGNERIA SPICATA FOREST	QUGA4/PSSP6	514
G3		QUERCUS GARRYANA/SYMPHORICARPOS ALBUS FOREST	QUGA4/SYAL	248
G2		QUERCUS GARRYANA/TOXICODENDRON DIVERSILOBUM-SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	QUGA4/TODI-SYAL/ELGL	371,455
G3		RHUS GLABRA/PSEUDOROEGNERIA SPICATA SHRUBLAND	RHGL/PSSP6	121,250,462
G2G3	Y	ROSA NUTKANA/FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	RONU/FEID	121,251
G4		ROSA WOODSII SHRUBLAND	ROWO	195
G1		SALIX AMYGDALOIDES-SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA WOODLAND	SAAM2-SAEX-SALUL	224
G1		SALIX AMYGDALOIDES-SALIX FLUVIATILIS-SALIX LUCIDA SSP. LASIANDRA/CAREX SPP. WOODLAND	SAAM2-SAFL14-SALUL/CAREX	224
G2G3		SALIX ARCTICA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SAAR16/CALE4	304
G2		SALIX ARCTICA/POLYGONUM BISTORTOIDES DWARF-SHRUBLAND	SAAR16/POBI6	102
G3	Y	SALIX BEBBIANA SHRUBLAND	SABE2	23,137,195,449
G2		SALIX BOOTHII-SALIX GEYERIANA SHRUBLAND	SABO2-SAGE2	291
G2		SALIX BOOTHII-SALIX GEYERIANA/CAREX ANGUSTATA SHRUBLAND	SABO2-SAGE2/CAAN15	291
G2		SALIX BOOTHII-SALIX LEMMONII SHRUBLAND	SABO2-SALE	291,312
G4		SALIX BOOTHII/CALAMAGROSTIS CANADENSIS SHRUBLAND	SABO2/CACA4	362,363,367,376,474,522
G2G3		SALIX BOOTHII/CAREX AQUATILIS SHRUBLAND	SABO2/CAAQ	376,522,525
G3		SALIX BOOTHII/CAREX NEBRASCENSIS SHRUBLAND	SABO2/CANE2	376,380,522,525
G5		SALIX BOOTHII/CAREX ROSTRATA SHRUBLAND	SABO2/CARO6	291,362,363,367,376,380,474,522,525
G3		SALIX BOOTHII/EQUISETUM ARVENSE SHRUBLAND	SABO2/EQAR	376,522
G3		SALIX BOOTHII/MAIANTHEMUM STELLATUM SHRUBLAND	SABO2/MAST4	522
G3		SALIX BOOTHII/MESIC FORB SHRUBLAND	SABO2/MESIC FORB	367,376,380,522,525
G3		SALIX BOOTHII/MESIC GRAMINOID SHRUBLAND	SABO2/MESIC GRAMINOID	376,380,405
G1		SALIX BOOTHII/POA PALUSTRIS SHRUBLAND	SABO2/POPA2	380,522
G3		SALIX CANDIDA/CAREX ROSTRATA SHRUBLAND	SACA4/CARO6	195
G3		SALIX COMMUTATA/CAREX SCOPULORUM SHRUBLAND	SACO2/CASC12	474
G3		SALIX DRUMMONDIANA SHRUBLAND	SADR	21,195,196,276,386
G1		SALIX EASTWOODIAE SHRUBLAND	SAEA	522
G2		SALIX EASTWOODIAE/CAREX AQUATILIS SHRUBLAND	SAEA/CAAQ	362
G2		SALIX EASTWOODIAE/CAREX ROSTRATA SHRUBLAND	SAEA/CARO6	362
G5		SALIX EXIGUA SHRUBLAND	SAEX	156,195,196,276,291,386
G1		SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA SHRUBLAND	SAEX-SALUL	364
G3Q		SALIX EXIGUA/BARREN SHRUBLAND	SAEX/BARREN	376,380,474
G3		SALIX EXIGUA/EQUISETUM ARVENSE SHRUBLAND	SAEX/EQAR	522
G2Q		SALIX EXIGUA/MESIC FORB SHRUBLAND	SAEX/MESIC FORB	376,380
G3Q		SALIX EXIGUA/MESIC GRAMINOID SHRUBLAND	SAEX/MESIC GRAMINOID	376,380
G2		SALIX GEYERIANA-SALIX LEMMONII SHRUBLAND	SAGE2-SALE	291
GU		SALIX GEYERIANA-SALIX RIGIDA SHRUBLAND	SAGE2-SARI2	371
G5		SALIX GEYERIANA/CALAMAGROSTIS CANADENSIS SHRUBLAND	SAGE2/CACA4	97,195,380,474,522
G3?		SALIX GEYERIANA/CAREX AQUATILIS SHRUBLAND	SAGE2/CAAQ	245,376,380,522,525
G5		SALIX GEYERIANA/CAREX ROSTRATA SHRUBLAND	SAGE2/CARO6	195,362,380,474,522
G4		SALIX GEYERIANA/DESCHAMPSIA CESPITOSA SHRUBLAND	SAGE2/DECE	245,344,376,380
G3		SALIX GEYERIANA/MESIC FORB SHRUBLAND	SAGE2/MESIC FORB	245,376,380,522,525
G2G3		SALIX GEYERIANA/MESIC GRAMINOID SHRUBLAND	SAGE2/MESIC GRAMINOID	376,380,522
G2		SALIX GEYERIANA/POA PALUSTRIS SHRUBLAND	SAGE2/POPA2	362,380,522
G2Q		SALIX LASIOLEPIS/BARREN SHRUBLAND	SALA6/BARREN	380
G3Q		SALIX LASIOLEPIS/ROSA WOODSII/GRASS-FORB SHRUBLAND	SALA6/ROWO/GRASS-FORB	36
G3		SALIX LUCIDA SSP. LASIANDRA SHRUBLAND	SALUL	195
G3		SALIX LUTEA/CALAMAGROSTIS CANADENSIS SHRUBLAND	SALU2/CACA4	195
G4		SALIX LUTEA/CAREX ROSTRATA SHRUBLAND	SALU2/CARO6	195
G2		SALIX PLANIFOLIA SHRUBLAND	SAPL2	522
G3		SALIX PLANIFOLIA/CAREX AQUATILIS SHRUBLAND	SAPL2/CAAQ	195,222,245,298,326,376,380,451

G3		SALIX PLANIFOLIA/CAREX AQUATILIS-CAREX ROSTRATA SHRUBLAND	SAPL2/CAAQ-CARO6	362
G4		SALIX PLANIFOLIA/CAREX SCOPULORUM SHRUBLAND	SAPL2/CASC12	221,222,283,285
G2		SALIX RETICULATA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SARE2/CALE4	102
GU		SALIX RIGIDA/RIBES AUREUM SHRUBLAND	SARI2/RIAU	156,312
G4		SALIX WOLFII/CAREX AQUATILIS SHRUBLAND	SAWO/CAAQ	20,21,195,326,327,367,376,380,474,522,525
G2		SALIX WOLFII/CAREX NEBRASCENSIS SHRUBLAND	SAWO/CANE2	522
G4		SALIX WOLFII/CAREX ROSTRATA SHRUBLAND	SAWO/CARO6	245,363,367,376,380,474,522
G3		SALIX WOLFII/DESCHAMPSIA CESPITOSA SHRUBLAND	SAWO/DECE	195,376,380,522,525
G3		SALIX WOLFII/MESIC FORB SHRUBLAND	SAWO/MESIC FORB	245,362,376,380
G2		SALIX WOLFII/POA PALUSTRIS SHRUBLAND	SAWO/POPA2	522
G2	Y	SALIX WOLFII/SWERTIA PERENNIS-PEDICULARIS GROENLANDICA SHRUBLAND	SAWO/SWPE-PEGR2	473,474
G4		SALVIA DORRII/PSEUDOROEGNERIA SPICATA DWARF-SHRUBLAND	SADO4/PSSP6	371
G5Q		SARCOBATUS VERMICULATUS (DUNE) SPARSE VEGETATION	SAVE4 (DUNE)	521
G5		SARCOBATUS VERMICULATUS SHRUBLAND	SAVE4	62,118,181,521
G5Q		SARCOBATUS VERMICULATUS/ATRIPLEX CONFERTIFOLIA/ARTEMISIA SPINESCENS SHRUBLAND	SAVE4/ATCO/ARSP5	42
G5		SARCOBATUS VERMICULATUS/CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND	SAVE4/CHNA2	159
G4		SARCOBATUS VERMICULATUS/DISTICHLIS SPICATA SHRUBLAND	SAVE4/DISP	121,172,354
G4		SARCOBATUS VERMICULATUS/ELYMUS ELYMOIDES SHRUBLAND	SAVE4/ELEL5	42
G3		SARCOBATUS VERMICULATUS/LEYMUS CINEREUS SHRUBLAND	SAVE4/LECI4	354
G4		SARCOBATUS VERMICULATUS/ORYZOPSIS HYMENOIDES SHRUBLAND	SAVE4/ORHY	40
G4		SARCOBATUS VERMICULATUS/PASCOPYRUM SMITHII SPARSE SHRUBLAND	SAVE4/PASM	148,163,192,198,354,370
G5		SARCOBATUS VERMICULATUS/SUAEDA NIGRA SHRUBLAND	SAVE4/SUNI	106,108
G5		SCIRPUS ACUTUS HERBACEOUS VEGETATION	SCAC	195
G1Q		SCIRPUS AMERICANUS HERBACEOUS VEGETATION	SCAM2	473
G1	Y	SCIRPUS CESPITOSUS-CAREX LIVIDA HERBACEOUS VEGETATION	SCCE2-CALI	473
G4		SCIRPUS MARITIMUS HERBACEOUS VEGETATION	SCMA	195
G2G4		SCIRPUS PUNGENS HERBACEOUS VEGETATION	SCPU3	60,195
G2?		SENECIO TRIANGULARIS HERBACEOUS VEGETATION	SETR	195,283
G4		SENECIO TRIANGULARIS-VERATRUM CALIFORNICUM HERBACEOUS VEGETATION	SETR-VECA2	207,291,312
G3		SPARTINA PECTINATA HERBACEOUS VEGETATION	SPPE	155,195,196,198
G2	Y	SPHAEROMERIA ARGENTEA-ARTEMISIA FRIGIDA-POA SECUNDA HERBACEOUS VEGETATION	SPAR2-ARFR4-POSE	82
G2	Y	SPHAEROMERIA ARGENTEA-ORYZOPSIS SWALLENII HERBACEOUS VEGETATION	SPAR2-ORSW	82
G4		SPIRAEA DOUGLASII SHRUBLAND	SPDO	195
G3G5		SPOROBOLUS AIROIDES-DISTICHLIS STRICTA HERBACEOUS VEGETATION	SPAI-DIST3	357,521
G5		STIPA COMATA-BOUTELOUA GRACILIS HERBACEOUS VEGETATION	STCO4-BOGR2	27,111,123,200,221,262,354,395,447,479
G3	Y	STIPA COMATA-POA SECUNDA HERBACEOUS VEGETATION	STCO4-POSE	104,121,390,526
G5		SUAEDA MOQUINII HERBACEOUS VEGETATION	SUMO	157
G4		SYMPHORICARPOS ALBUS-ROSA NUTKANA SHRUBLAND	SYAL-RONU	121,462
G4		SYMPHORICARPOS OCCIDENTALIS SHRUBLAND	SYOC	88,89,195
G2	Y	THUJA PLICATA/ACHLYS TRIPHYLLA FOREST	THPL/ACTR	466
G2	Y	THUJA PLICATA/ADIANTUM PEDATUM FOREST	THPL/ADPE	98
G2		THUJA PLICATA/ARALIA NUDICAULIS FOREST	THPL/ARNU2	509,513
G4		THUJA PLICATA/ASARUM CAUDATUM FOREST	THPL/ASCA2	98,428
G4		THUJA PLICATA/ATHYRIUM FILIX-FEMINA FOREST	THPL/ATFI	98,122,195,513
G5		THUJA PLICATA/CLINTONIA UNIFLORA FOREST	THPL/CLUN2	98,385,509,528
G3		THUJA PLICATA/GYMNOCARPIUM DRYOPTERIS FOREST	THPL/GYDR	98,195
G2		THUJA PLICATA/LINNAEA BOREALIS FOREST	THPL/LIBO3	13,511
G4		THUJA PLICATA/LYSICHITON AMERICANUS FOREST	THPL/LYAM3	171,180,217,282,467,492
G3		THUJA PLICATA/OPLOPANAX HORRIDUS FOREST	THPL/OPHO	98,119,122,142,171,385,509,513
G3		THUJA PLICATA/TAXUS BREVIFOLIA/ASARUM CAUDATUM FOREST	THPL/TABR2/ASCA2	98
G3		THUJA PLICATA/VACCINIUM MEMBRANACEUM FOREST	THPL/VAME	513
G4		TSUGA HETEROPHYLLA/ACHLYS TRIPHYLLA FOREST	TSHE/ACTR	167,170,172,174,190,207,214,217,467,514
G3		TSUGA HETEROPHYLLA/ARALIA NUDICAULIS FOREST	TSHE/ARNU2	98,513
G3		TSUGA HETEROPHYLLA/ARCTOSTAPHYLOS NEVADENSIS WOODLAND	TSHE/ARNE	514

G3		TSUGA HETEROPHYLLA/ASARUM CAUDATUM FOREST	TSHE/ASCA2	98,428,514
G2	Y	TSUGA HETEROPHYLLA/ATHYRIUM FILIX-FEMINA FOREST	TSHE/ATFI	98,350,497
G5		TSUGA HETEROPHYLLA/CLINTONIA UNIFLORA FOREST	TSHE/CLUN2	98,385,513,528
G4		TSUGA HETEROPHYLLA/GYMNOCARPIUM DRYOPTERIS FOREST	TSHE/GYDR	98,195,509,513
G3		TSUGA HETEROPHYLLA/LINNAEA BOREALIS FOREST	TSHE/LIBO3	207
G5		TSUGA HETEROPHYLLA/MAHONIA NERVOSA VAR. NERVOSA FOREST	TSHE/MANEN	190,206,207,210,211,212,213,214, 215,217,220,467,514
G2	Y	TSUGA HETEROPHYLLA/MENZIESIA FERRUGINEA FOREST	TSHE/MEFE	98,513
G4		TSUGA HETEROPHYLLA/OPLOPANAX HORRIDUS FOREST	TSHE/OPHO	98,172,190,211,212,213,214,216, 217,220,467,514
G1		TSUGA HETEROPHYLLA/RHODODENDRON ALBIFLORUM FOREST	TSHE/RHAL2	509
G4		TSUGA HETEROPHYLLA/RHODODENDRON MACROPHYLLUM FOREST	TSHE/RHMA3	13,190,206,207,214,217
G?		TSUGA HETEROPHYLLA/RUBUS PEDATUS FOREST	TSHE/RUPE	509,513
G4		TSUGA HETEROPHYLLA/VACCINIUM MEMBRANACEUM/LINNAEA BOREALIS FOREST	TSHE/VAME/LIBO3	13
G2	Y	TSUGA HETEROPHYLLA/XEROPHYLLUM TENAX FOREST	TSHE/XETE	98,172,214,217,509,513
G3		TSUGA MERTENSIANA/CLINTONIA UNIFLORA FOREST	TSME/CLUN2	98,344
G4		TSUGA MERTENSIANA/LUZULA GLABRATA VAR. HITCHCOCKII FOREST	TSME/LUGLH	98,207,385,424,514
G4		TSUGA MERTENSIANA/MENZIESIA FERRUGINEA FOREST	TSME/MEFE	98,385
G4		TSUGA MERTENSIANA/PHYLLODOCE EMPETRIFORMIS-VACCINIUM DELICIOSUM WOODLAND	TSME/PHEM-VADE	142,214,215,216,217,220
G3		TSUGA MERTENSIANA/RUBUS LASIOCOCCUS FOREST	TSME/RULA2	514
G2	Y	TSUGA MERTENSIANA/STREPTOPUS AMPLEXIFOLIUS FOREST	TSME/STAM2	98
G4		TSUGA MERTENSIANA/VACCINIUM MEMBRANACEUM FOREST	TSME/VAME	13,56,57,207,208,210,211,212,213, 214,215,217,220,250
G4		TSUGA MERTENSIANA/VACCINIUM SCOPARIUM FOREST	TSME/VASC	13,207,208,250,424,487
G4		TSUGA MERTENSIANA/XEROPHYLLUM TENAX FOREST	TSME/XETE	98,122,212,385,514
GU	Y	TYPHA DOMINGENSIS HERBACEOUS VEGETATION	TYDO	23
G5		TYPHA LATIFOLIA HERBACEOUS VEGETATION	TYLA	67,87,195,301,302,325,330,356,380,465
G5		VACCINIUM ULIGINOSUM/CAREX AQUATILIS VAR. DIVES SHRUBLAND	VAUL/CAAQD	175,291,408

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APPENDIX 1, (Part 2.)

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APPENDIX 1, (part 3). List of plant associations and alliances found in the California portion of the Columbia River Basin. These vegetation types have not been placed into the WRVC, therefore literature sources are not provided. Further information on these associations can be obtained from the California Natural Diversity Database (data on file). These types are included in the section level matrices.

PLANT ASSOCIATION NAME	ACRONYM
ABIES X SHASTENSIS/CASTANOPSIS CHRYSOPHYLLA	ABSH/CACH6
ABIES X SHASTENSIS/PENSTEMON	ABSH/PENSTEMON
ARCTOSTAPHYLOS PATULA SERIES	ARPA6
ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS /FESTUCA IDAHOENSIS-STIPA LEMMONNII	ARVI11-CECU/FEID-STLE2
BETULA GLANDULOSA-SALIX SPP.	BEGL-SALIX
CALOCEDRUS DECURRENS-PSEUDOTSUGA MENZIESII/CASTANOPIS CHRYSOPHYLLA	CADE27-PSME/CACH6
CEANOTHUS CUNEATUS SERIES	CECU
CEANOTHUS CUNEATUS-CERCOCARPUS MONTANUS VAR. GLABER-PRUNUS SUBCORDTATA	CECU-CEMOG-PRSU
CEANOTHUS CUNEATUS/PSEUDOROEGNERIA SPICATA	CECU/PSSP6
CEANOTHUS VELUTINOUS	CEVE
CERCOCARPUS LEDIFOLIUS SERIES	CELE3-ARTRV
CUPRESSUS BAKERI SERIES	CUBA
FESTUCA IDAHOENSIS	FEID
ERICAMERIA DISCOIDEA	ERDI
HOLODISCUS DISCOLOR SERIES	HOMI
JUNIPERUS OCCIDENTALIS-PINUS PONDEROSA-QUERCUS GARRYANA /CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS	JUOC-PIPO-QUGA4/CECU/FEID
JUNIPERUS OCCIDENTALIS-QUERCUS GARRYANA	JUOC-QUGA4
JUNIPERUS OCCIDENTALIS/ARTEMISIA NOVA	JUOC/ARNO4
LEPTODACTYLON PUNGENS	LEPU
NASSELLA PULCHRA	NAPU
PINUS ALBICAULIS/ARENARIA ACULEATA	PIAL/ARAC
PINUS ALBICAULIS/PENSTEMON GRACILENTUS	PIAL/PEGR
PINUS ALBICAULIS/STIPA CALIFORNICA	PIAL/STCA
PINUS ATTENUATA SERIES	PIAT
PINUS JEFFREYI-QUERCUS KELLOGGII/POA SECUNDA	PIJE-QUKE/POSE
PINUS JEFFREYI-QUERCUS KELLOGGII/RHUS TRILOBATA	PIJE-QUKE/RHTR
PINUS JEFFREYI/ARTEMISIA TRIDENTATA SSP. VASEYANA	PIJE/ARTRV
PINUS JEFFREYI/PURSHIA TRIDENTATA	PIJE/PUTR2
PINUS LAMBERTIANA-PSEUDOTSUGA MENZIESII/CASTANOPSIS CHRYSOPHYLLA	PILA-PIPO-PSME
PINUS PONDEROSA-PINUS JEFFREYI-CALOCEDRUS DECURRENS SERIES	PIPO-PIJE-CADE27
PINUS PONDEROSA-PINUS JEFFREYI/FRANGULA RUBRA	PIPO-PIJE/FRRU
PINUS PONDEROSA-PINUS JEFFREYI/MAHONIA REPENS	PIPO-PIJE/MARE11
PINUS PONDEROSA-PINUS JEFFREYI/PURSHIA TRIDENTATA	PIPO-PIJE/PUTR2
PINUS PONDEROSA-PINUS JEFFREYI/STIPA COLUMBIANA	PIPO-PIJE/STCOL
PINUS PONDEROSA-QUERCUS GARRYANA	PIPO-QUGA4
PINUS PONDEROSA-QUERCUS KELLOGGII SERIES	PIPO-QUKE
PINUS PONDEROSA-QUERCUS WISLIZENI SERIES	PIPO-QUWI
PINUS PONDEROSA/AMELANCHIER ALNIFOLIA-MAHONIA REPENS	PIPO/AMAL2-MARE11
PINUS PONDEROSA/CERCOCARPUS LEDIFOLIUS-PURSHIA TRIDENTATA	PIPO/CELE3-PUTR2
PINUS WASHOENSIS/ARCTOSTAPHYLOS NEVADENSIS	PIWA/ARNE
PINUS WASHOENSIS/SYMPHORICARPOS LONGIFLORUS/PSEUDOSTELLARIA JAMESIANA	PIWA/SYLO/PSJA
POPULUS FREMONTII/SALIX LAEVIGATA	POFR2/SALA
POA SECUNDA SERIES	POSE
PRUNUS SUBCORDATA	PRSU
QUERCUS DOUGLASII	QUDO
QUERCUS BREWERI	QUBR
QUERCUS KELLOGGII	QUKE
QUERCUS VACCINIFOLIA	QUVA
SALIX LEMMONII	SALE
SALIX LEMMONII/LEYMUS CINEREUS	SALE/LECI4
SALIX LIGULIFOLIA SERIES	SALI
STIPA LEMMONII	STLE2
STIPA THURBERIANA	STTH2
TSUGA MERTENSIANA/JUNCUS PARRYI	TSME/JUPA

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APPENDIX 2. List of plant associations representing Potential Vegetation found in the Columbia River Basin, with global ranks of G1 through G2G4. Global ranks provide a numerical assessment of the association's relative rarity across its entire range of distribution, with G1 indicating critically imperiled, and G5 indicating the most common. For further explanation of The Nature Conservancy's ranking system, see Bourgeron and Engelking (1994). Nomenclature of species names follows Kartesz (1994). Standardized acronyms are also listed for each association.

GLOBAL RANK G1

ALNUS INCANA-BETULA OCCIDENTALIS/(SALIX SPP.) SHRUBLAND	ALIN2-BEOC2/(SALIX)
ALNUS INCANA-POPULUS TREMULOIDES/BETULA GLANDULOSA-RIBES SPP./CAREX SPP. SHRUBLAND	ALIN2-POTR5/BEGL-RIBES/CAREX
ALNUS INCANA-POPULUS TREMULOIDES/CORNUS SERICEA SHRUBLAND	ALIN2-POTR5/COSE16
ALNUS INCANA-POPULUS TRICHOCARPA/(SALIX SPP.)/CAREX SPP. FOREST	ALIN2-POTR15/(SALIX)/CAREX
ALNUS RHOMBIFOLIA/BETULA OCCIDENTALIS FOREST	ALRH2/BEOC2
ALNUS RHOMBIFOLIA/PHILADELPHUS LEWISII FOREST	ALRH2/PHLE4
ARTEMISIA CANA/(ELYMUS CANINUS)-POA NEVADENSIS SPARSE SHRUBLAND	ARCA13/(ELCA11)-PONE3
ARTEMISIA CANA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARCA13/LECI4
ARTEMISIA TRIDENTATA SSP. VASEYANA-CERCOCARPUS LEDIFOLIUS/ELYMUS CANINUS-POA SECUNDA SHRUBLAND	ARTRV-CELE3/ELCA11-POSE
ARTEMISIA TRIDENTATA-PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES-STIPA COMATA SPARSE SHRUBLAND	ARTR2-PUTR2/ORHY-STCO4
ARTEMISIA TRIPARTITA/STIPA COMATA SPARSE SHRUBLAND	ARTR4/STCO4
CERCOCARPUS LEDIFOLIUS/HOLODISCUS DUMOSUS SHRUBLAND	CELE3/HODU
CHRYSOTHAMNUS NAUSEOSUS/LEYMUS FLAVESCENS/PSORALIDIUM LANCEOLATUM SHRUBLAND	CHNA2/LEFL4/PSLA3
DANTHONIA CALIFORNICA (VALLEY GRASSLAND) HERBACEOUS VEGETATION	DACA3 (VALLEY GRASSLAND)
ERIOGONUM OVALIFOLIUM VAR. DEPRESSUM DWARF-SHRUBLAND	EROVD
JUNIPERUS OCCIDENTALIS/ARTEMISIA TRIDENTATA/CAREX FILIFOLIA SPARSE WOODLAND	JUOC/ARTR2/CAFI
JUNIPERUS OSTEOSPERMA/LEYMUS AMBIGUUS SPARSE WOODLAND	JUOS/LEAM
JUNIPERUS OSTEOSPERMA/PURSHIA TRIDENTATA-SYMPHORICARPOS OREOPHILUS/PSEUDOROEGNERIA SPICATA WOODLAND	JUOS/PUTR2-SYOR2/PSSP6
JUNIPERUS OSTEOSPERMA/STIPA COMATA SPARSE WOODLAND	JUOS/STCO4
LEYMUS CINEREUS (BOTTOMLANDS) HERBACEOUS VEGETATION	LECI4 (BOTTOMLANDS)
PICEA SPP./CAREX DISPERMA FOREST	PICEA/CADI6
PINUS FLEXILIS/PURSHIA TRIDENTATA WOODLAND	PIFL2/PUTR2
PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/ARTEMISIA TRIDENTATA SSP. VASEYANA/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/ARTRV/PSSP6
PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA WOODLAND	PIMO-JUOS/CELE3/PSSP6
PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/LEYMUS CINEREUS WOODLAND	PIMO-JUOS/LECI4
PINUS MONOPHYLLA-JUNIPERUS OSTEOSPERMA/PRUNUS VIRGINIANA WOODLAND	PIMO-JUOS/PRVI
PINUS PONDEROSA-PSEUDOTSUGA MENZIESII WOODLAND	PIPO-PSME
PINUS PONDEROSA-QUERCUS GARRYANA/ARCTOSTAPHYLOS VISCIDA/FESTUCA CALIFORNICA WOODLAND	PIPO-QUGA4/ARVI4/FECA
PINUS PONDEROSA/ARTEMISIA TRIDENTATA/STIPA SPP. FOREST	PIPO/ARTR2/STIPA
PINUS PONDEROSA/ASPIDOTIS DENSA WOODLAND	PIPO/ASDE6
PINUS PONDEROSA/CRATAEGUS DOUGLASII WOODLAND	PIPO/CRDO2
PINUS PONDEROSA/PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SPARSE VEGETATION	PIPO/PUTR2/ORHY
PINUS PONDEROSA/STIPA COMATA WOODLAND	PIPO/STCO4
POA NEVADENSIS-PUCCINELLIA LEMMONII-ELYMUS ELYMOIDES HERBACEOUS VEGETATION	PONE3-PULE-ELEL5
POPULUS TRICHOCARPA/CICUTA DOUGLASII FOREST	POTR15/CIDO
POPULUS TRICHOCARPA/CRATAEGUS DOUGLASII FOREST	POTR15/CRDO2
POPULUS TRICHOCARPA/SALIX EXIGUA FOREST	POTR15/SAEX
PURSHIA TRIDENTATA-CHRYSOTHAMNUS NAUSEOSUS SHRUBLAND	PUTR2-CHNA2
PURSHIA TRIDENTATA/(PSEUDOROEGNERIA SPICATA)-FESTUCA IDAHOENSIS SPARSE SHRUBLAND	PUTR2/(PSSP6)-FEID
PURSHIA TRIDENTATA/CAREX PENSYLVANICA-STIPA OCCIDENTALIS SPARSE SHRUBLAND	PUTR2/CAPE6-STOC2
PURSHIA TRIDENTATA/ORYZOPSIS HYMENOIDES SHRUBLAND	PUTR2/ORHY
QUERCUS GARRYANA/FESTUCA IDAHOENSIS FOREST	QUGA4/FEID
SALIX AMYGDALOIDES-SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA WOODLAND	SAAM2-SAEX-SALUL
SALIX AMYGDALOIDES-SALIX FLUVIATILIS-SALIX LUCIDA SSP. LASIANDRA/CAREX SPP. WOODLAND	SAAM2-SAFL14-SALUL/CAREX
SALIX BOOTHII/POA PALUSTRIS SHRUBLAND	SABO2/POPA2
SALIX EASTWOODIAE SHRUBLAND	SAEA
SALIX EXIGUA-SALIX LUCIDA SSP. LASIANDRA SHRUBLAND	SAEX-SALUL
SCIRPUS CESPITOSUS-CAREX LIVIDA HERBACEOUS VEGETATION	SCCE2-CALI
TSUGA HETEROPHYLLA/RHODODENDRON ALBIFLORUM FOREST	TSHE/RHAL2

GLOBAL RANK G1?

PSEUDOROEGNERIA SPICATA-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	PSSP6-ERHE2
PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS (PALOUSE) HERBACEOUS VEGETATION	PSSP6-FEID (PALOUSE)
PURSHIA TRIDENTATA/PRUNUS VIRGINIANA SHRUBLAND	PUTR2/PRVI

GLOBAL RANK G1G2

ARTEMISIA ARBUSCULA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARAR8/LEAM
ARTEMISIA NOVA/LEYMUS AMBIGUUS SPARSE DWARF-SHRUBLAND	ARNO4/LEAM

GLOBAL RANK G1Q

PINUS FLEXILIS/PENTAPHYLLOIDES FLORIBUNDA/DISTICHLIS STRICTA WOODLAND	PIFL2/PEFL15/DIST3
SCIRPUS AMERICANUS HERBACEOUS VEGETATION	SCAM2

GLOBAL RANK G2

ABIES CONCOLOR-CALOCEDRUS DECURRENS-PINUS PONDEROSA/AMELANCHIER ALNIFOLIA FOREST	ABCO-CADE27-PIPO/AMAL2
ABIES CONCOLOR-PINUS LAMBERTIANA-PINUS PONDEROSA/ARCTOSTAPHYLOS PATULA FOREST	ABCO-PILA-PIPO/ARPA6
ABIES GRANDIS/ARCTOSTAPHYLOS NEVADENSIS WOODLAND	ABGR/ARNE
ABIES GRANDIS/CASTANOPSIS CHRYSOPHYLLA FOREST	ABGR/CACH6
ABIES GRANDIS/COPTIS OCCIDENTALIS FOREST	ABGR/COOC
ABIES GRANDIS/TAXUS BREVIFOLIA FOREST	ABGR/TABR2
ABIES GRANDIS/VACCINIUM CESPITOSUM FOREST	ABGR/VACE
ACER GRANDIDENTATUM/CALAMAGROSTIS RUBESCENS FOREST	ACGR3/CARU
AGROSTIS EXARATA-AGROSTIS SCABRA HERBACEOUS VEGETATION	AGEX-AGSC5
ALLENROLFEA OCCIDENTALIS SHRUBLAND	ALOC2
ALNUS INCANA/SYMPHORICARPOS ALBUS SHRUBLAND	ALIN2/SYAL
ALNUS RHOMBIFOLIA-ABIES GRANDIS FOREST	ALRH2-ABGR
ALNUS RHOMBIFOLIA/CELTIS LAEVIGATA VAR. RETICULATA FOREST	ALRH2/CELAR
ALNUS RHOMBIFOLIA/SAMBUCUS CERULEA FOREST	ALRH2/SACE3
ARCTOSTAPHYLOS VISCIDA-CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS-STIPA LEMMONII SHRUBLAND	ARVI4-CECU/FEID-STLE2
ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS SPARSE SHRUBLAND	ARLO3-SPCR
ARTEMISIA ARBUSCULA SSP. THERMOPOLA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARART/FEID
ARTEMISIA CANA-ARTEMISIA TRIDENTATA SSP. VASEYANA/POA CUSICKII SPARSE SHRUBLAND	ARCA13-ARTRV/POCU3
ARTEMISIA CANA/CAREX NEBRASCENSIS-POA CUSICKII SPARSE SHRUBLAND	ARCA13/CANE2-POCU3
ARTEMISIA PEDATIFIDA/FESTUCA IDAHOENSIS SPARSE DWARF-SHRUBLAND	ARPE6/FEID
ARTEMISIA TRIDENTATA SSP. VASEYANA/STIPA OCCIDENTALIS SHRUBLAND	ARTRV/STOC2
ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS-PERAPHYLLUM RAMOSISSIMUM/FESTUCA IDAHOENSIS SHRUBLAND	ARTRW8-PERA4/FEID
ARTEMISIA TRIDENTATA SSP. WYOMINGENSIS/STIPA COMATA SHRUBLAND	ARTRW8/STCO4
ARTEMISIA TRIDENTATA-ATRIPLEX CANESCENS-SARCOBATUS VERMICULATUS/(ORYZOPSIS HYMENOIDES) SHRUBLAND	ARTR2-ATCA2-SAVE4/(ORHY)
ARTEMISIA TRIPARTITA/FESTUCA SCABRELLA SPARSE SHRUBLAND	ARTR4/FESC
ATRIPLEX CONFERTIFOLIA/LEYMUS AMBIGUUS SHRUBLAND	ATCO/LEAM
ATRIPLEX CONFERTIFOLIA/ORYZOPSIS HYMENOIDES SHRUBLAND	ATCO/ORHY
BETULA OCCIDENTALIS/CRATAEGUS DOUGLASII SHRUBLAND	BEOC2/CRDO2
BETULA OCCIDENTALIS/POPULUS TRICHOCARPA/SALIX SPP. SHRUBLAND	BEOC2/POTR15/SALIX
CALAMAGROSTIS PURPURASCENS HERBACEOUS VEGETATION	CAPU
CAREX APERTA HERBACEOUS VEGETATION	CAAP3
CAREX SCIRPOIDEA-POTENTILLA DIVERSIFOLIA HERBACEOUS VEGETATION	CASC10-PODI2
CAREX STENOPHYLLA-POA SECUNDA SPARSE SHRUBLAND	CAST40-POSE
OCARPUS LEDIFOLIUS/CALAMAGROSTIS RUBESCENS SHRUBLAND	CELE3/CARU
OCARPUS LEDIFOLIUS/FESTUCA IDAHOENSIS SHRUBLAND	CELE3/FEID

CERCOCARPUS LEDIFOLIUS/LEYMUS AMBIGUUS SHRUBLAND	CELE3/LEAM
CERCOCARPUS LEDIFOLIUS/PSEUDOROEGNERIA SPICATA-FESTUCA IDAHOENSIS SHRUBLAND	CELE3/PSSP6-FEID
CERCOCARPUS LEDIFOLIUS/SYMPHORICARPOS OREOPHILUS SHRUBLAND	CELE3/SYOR2
CRATAEGUS DOUGLASII SHRUBLAND	CRDO2
CRATAEGUS DOUGLASII/HERACLEUM LANATUM SHRUBLAND	CRDO2/HELA4
CRATAEGUS DOUGLASII/ROSA WOODSII SHRUBLAND	CRDO2/ROWO
ELYMUS GLAUCUS HERBACEOUS VEGETATION	ELGL
FESTUCA IDAHOENSIS-CAREX SCIRPOIDEA HERBACEOUS VEGETATION	FEID-CASC10
FESTUCA IDAHOENSIS-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	FEID-ERCA8
FESTUCA IDAHOENSIS-ERIOGONUM HERACLEOIDES HERBACEOUS VEGETATION	FEID-ERHE2
FESTUCA IDAHOENSIS-HIERACIUM CYNOGLOSSOIDES HERBACEOUS VEGETATION	FEID-HICY
FESTUCA IDAHOENSIS-SYMPHORICARPOS ALBUS SPARSE SHRUBLAND	FEID-SYAL
FESTUCA VIRIDULA-FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	FEVI-FEID
IVESIA GORDONII-ERIOGONUM CAESPITOSUM HERBACEOUS VEGETATION	IVGO-ERCA8
IVESIA GORDONII-MINUARTIA OBTUSILOBA HERBACEOUS VEGETATION	IVGO-MIOB2
JUNIPERUS OCCIDENTALIS/ARTEMISIA ARBUSCULA/DANTHONIA UNISPICATA-POA SECUNDA SPARSE WOODLAND	JUOC/ARAR8/DAUN-POSE
JUNIPERUS OCCIDENTALIS/ARTEMISIA RIGIDA/POA SECUNDA SPARSE WOODLAND	JUOC/ARRI2/POSE
JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS-SYMPHORICARPOS OREOPHILUS WOODLAND	JUOC/CELE3-SYOR2
JUNIPERUS OCCIDENTALIS/CERCOCARPUS LEDIFOLIUS/CAREX GEYERI WOODLAND	JUOC/CELE3/CAGE2
LEYMUS AMBIGUUS-ENCELIOPSIS NUDICAULIS HERBACEOUS VEGETATION	LEAM-ENNU
LEYMUS AMBIGUUS-LUPINUS ARGENTEUS HERBACEOUS VEGETATION	LEAM-LUAR3
LEYMUS FLAVESCENS SPARSE VEGETATION	LEFL4
LEYMUS TRITICOIDES-POA SECUNDA HERBACEOUS VEGETATION	LETR5-POSE
PHYSOCARPUS MALVACEUS-SYMPHORICARPOS ALBUS SHRUBLAND	PHMA5-SYAL
PICEA ENGELMANNII/CAREX DISPERMA FOREST	PIEN/CADI6
PICEA ENGELMANNII/HYPNUM REVOLUTUM FOREST	PIEN/HYRE70
PICEA ENGELMANNII/PHYSOCARPUS MALVACEUS FOREST	PIEN/PHMA5
PICEA SPP./LYSICHITON AMERICANUS FOREST	PICEA/LYAM3
PINUS CONTORTA-(POPULUS TREMULOIDES)/SPIRAEA DOUGLASII/CAREX SPP. FOREST	PICO-(POTR5)/SPDO/CAREX
PINUS CONTORTA/ELYMUS GLAUCUS FOREST	PICO/ELGL
PINUS PONDEROSA-PSEUDOTSUGA MENZIESII/ARCTOSTAPHYLOS NEVADENSIS FOREST	PIPO-PSME/ARNE
PINUS PONDEROSA-QUERCUS GARRYANA/BALSAMORHIZA SAGITTATA WOODLAND	PIPO-QUGA4/BASA3
PINUS PONDEROSA/ARTEMISIA TRIDENTATA SSP. VASEYANA/POA NERVOSA FOREST	PIPO/ARTRV/PONE2
PINUS PONDEROSA/CALAMAGROSTIS RUBESCENS FOREST	PIPO/CARU
PINUS PONDEROSA/ELYMUS GLAUCUS FOREST	PIPO/ELGL
PINUS PONDEROSA/PHYSOCARPUS MALVACEUS FOREST	PIPO/PHMA5
PINUS PONDEROSA/PURSHIA TRIDENTATA/STIPA OCCIDENTALIS FOREST	PIPO/PUTR2/STOC2
PINUS PONDEROSA/WYETHIA MOLLIS FOREST	PIPO/WYMO
POA CUSICKII HERBACEOUS VEGETATION	POCU3
POPULUS TREMULOIDES/CAREX SPP. FOREST	POTR5/CAREX
POPULUS TREMULOIDES/SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	POTR5/SYAL/ELGL
PSEUDOROEGNERIA SPICATA-ARISTIDA LONGISETA-SPOROBOLUS CRYPTANDRUS HERBACEOUS VEGETATION	PSSP6-ARLO3-SPCR
PURSHIA TRIDENTATA/STIPA COMATA SPARSE SHRUBLAND	PUTR2/STCO4
QUERCUS GARRYANA/CAREX GEYERI FOREST	QUGA4/CAGE2
QUERCUS GARRYANA/CEANOTHUS CUNEATUS/FESTUCA IDAHOENSIS WOODLAND	QUGA4/CECU/FEID
QUERCUS GARRYANA/ELYMUS GLAUCUS FOREST	QUGA4/ELGL
QUERCUS GARRYANA/TOXICODENDRON DIVERSILOBUM-SYMPHORICARPOS ALBUS/ELYMUS GLAUCUS WOODLAND	QUGA4/TODI-SYAL/ELGL
SALIX ARCTICA/POLYGONUM BISTORTOIDES DWARF-SHRUBLAND	SAAR16/POBI6
SALIX BOOTHII-SALIX GEYERIANA SHRUBLAND	SABO2-SAGE2
SALIX BOOTHII-SALIX GEYERIANA/CAREX ANGUSTATA SHRUBLAND	SABO2-SAGE2/CAAN15
SALIX BOOTHII-SALIX LEMMONII SHRUBLAND	SABO2-SALE
SALIX EASTWOODIAE/CAREX AQUATILIS SHRUBLAND	SAEA/CAAQ
SALIX EASTWOODIAE/CAREX ROSTRATA SHRUBLAND	SAEA/CARO6
SALIX GEYERIANA-SALIX LEMMONII SHRUBLAND	SAGE2-SALE
SALIX GEYERIANA/POA PALUSTRIS SHRUBLAND	SAGE2/POPA2
SALIX PLANIFOLIA SHRUBLAND	SAPL2

SALIX RETICULATA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SARE2/CALE4
SALIX WOLFII/CAREX NEBRASCENSIS SHRUBLAND	SAWO/CANE2
SALIX WOLFII/POA PALUSTRIS SHRUBLAND	SAWO/POPA2
SALIX WOLFII/SWERTIA PERENNIS-PEDICULARIS GROENLANDICA SHRUBLAND	SAWO/SWPE-PEGR2
SPHAEROMERIA ARGENTEA-ARTEMISIA FRIGIDA-POA SECUNDA HERBACEOUS VEGETATION	SPAR2-ARFR4-POSE
SPHAEROMERIA ARGENTEA-ORYZOPSIS SWALLENII HERBACEOUS VEGETATION	SPAR2-ORSW
THUJA PLICATA/ACHLYS TRIPHYLLA FOREST	THPL/ACTR
THUJA PLICATA/ADIANTUM PEDATUM FOREST	THPL/ADPE
THUJA PLICATA/ARALIA NUDICAULIS FOREST	THPL/ARNU2
THUJA PLICATA/LINNAEA BOREALIS FOREST	THPL/LIBO3
TSUGA HETEROPHYLLA/ATHYRIUM FILIX-FEMINA FOREST	TSHE/ATFI
TSUGA HETEROPHYLLA/MENZIESIA FERRUGINEA FOREST	TSHE/MEFE
TSUGA HETEROPHYLLA/XEROPHYLLUM TENAX FOREST	TSHE/XETE
TSUGA MERTENSIANA/STREPTOPUS AMPLEXIFOLIUS FOREST	TSME/STAM2

GLOBAL RANK G2?

ACER NEGUNDO/EQUISETUM ARVENSE FOREST	ACNE2/EQAR
ALNUS VIRIDIS SSP. SINUATA SHRUBLAND	ALVIS
FESTUCA IDAHOENSIS-FESTUCA KINGII HERBACEOUS VEGETATION	FEID-FEKI2
JUNIPERUS OCCIDENTALIS/FESTUCA IDAHOENSIS SPARSE WOODLAND	JUOC/FEID
POPULUS TREMULOIDES/RUBUS PARVIFLORUS FOREST	POTR5/RUPA
PSEUDOROEGNERIA SPICATA HERBACEOUS VEGETATION	PSSP6
SENECIO TRIANGULARIS HERBACEOUS VEGETATION	SETR

GLOBAL RANK G2G3

ALNUS INCANA/MESIC FORB SHRUBLAND	ALIN2/MESIC FORB
ALNUS INCANA/MESIC GRAMINOID SHRUBLAND	ALIN2/MESIC GRAMINOID
ARTEMISIA CANA SSP. VISCIDULA/DESCHAMPSIA CESPITOSA SHRUBLAND	ARCAV2/DECE
ARTEMISIA TRIDENTATA SSP. TRIDENTATA/LEYMUS CINEREUS SHRUBLAND	ARTRT/LECI4
ARTEMISIA TRIDENTATA SSP. TRIDENTATA/PASCOPYRUM SMITHII SHRUBLAND	ARTRT/PASM
BETULA OCCIDENTALIS/MESIC FORB SHRUBLAND	BEOC2/MESIC FORB
CAREX PRAEGRACILIS-CAREX AQUATILIS HERBACEOUS VEGETATION	CAPR5-CAAQ
DANTHONIA INTERMEDIA HERBACEOUS VEGETATION	DAIN
POPULUS ANGUSTIFOLIA/ACER GRANDIDENTATUM FOREST	POAN3/ACGR3
PSEUDOTSUGA MENZIESII/PAXISTIMA MYRSINITES FOREST	PSME/PAMY
ROSA NUTKANA/FESTUCA IDAHOENSIS HERBACEOUS VEGETATION	RONU/FEID
SALIX ARCTICA/CALTHA LEPTOSEPALA DWARF-SHRUBLAND	SAAR16/CALE4
SALIX BOOTHII/CAREX AQUATILIS SHRUBLAND	SABO2/CAAQ
SALIX GEYERIANA/MESIC GRAMINOID SHRUBLAND	SAGE2/MESIC GRAMINOID

GLOBAL RANK G2G4

ARTEMISIA TRIDENTATA/LEYMUS CINEREUS SPARSE SHRUBLAND	ARTR2/LECI4
ELEOCHARIS PALUSTRIS-DISTICHLIS SPICATA HERBACEOUS VEGETATION	ELPA3-DISP
ELEOCHARIS PALUSTRIS-JUNCUS BALTICUS HERBACEOUS VEGETATION	ELPA3-JUBA
JUNCUS BALTICUS-CAREX ROSSII HERBACEOUS VEGETATION	JUBA-CARO5
SCIRPUS PUNGENS HERBACEOUS VEGETATION	SCPU3

GLOBAL RANK G2Q

SALIX EXIGUA/MESIC FORB SHRUBLAND	SAEX/MESIC FORB
SALIX LASIOLEPIS/BARREN SHRUBLAND	SALA6/BARREN

GLOBAL RANK G?

GRAYIA SPINOSA/POA SECUNDA SHRUBLAND	GRSP/POSE
POPULUS TRICHOCARPA-ALNUS RHOMBIFOLIA FOREST	POTR15-ALRH2
QUERCUS GARRYANA/PSEUDOROEGNERIA SPICATA FOREST	QUGA4/PSSP6
TSUGA HETEROPHYLLA/RUBUS PEDATUS FOREST	TSHE/RUPE

GLOBAL RANK GU

JUNIPERUS OCCIDENTALIS/POA SECUNDA-STIPA OCCIDENTALIS SPARSE WOODLAND	JUOC/POSE-STOC2
PINUS PONDEROSA-POPULUS TREMULOIDES/CAREX SPP.-(POA SPP.) FOREST	PIPO-POTR5/CAREX-(POA)
SALIX GEYERIANA-SALIX RIGIDA SHRUBLAND	SAGE2-SARI2
SALIX RIGIDA/RIBES AUREUM SHRUBLAND	SARI2/RIAU
TYPHA DOMINGENSIS HERBACEOUS VEGETATION	TYDO

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APPENDIX 3. Section level PV classification: Distribution of the vegetation types (plant association level) in the temperature-moisture gradients matrices. For all biomes section by section.

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	PIPO/CRDO2	ABGR/CLUN2 ABLA/CLUN2 THPL/CLUN2	PSME/PHMA5	
COOL (2)	ALRH2-ABGR	PIPO/FESC PIPO/PHMA5 PIPO/SYAL		
WARM (3)	ALRH2/AMAL2 ALRH2/BEOC2 POTR15-ALRH2 POTR15/CIDO SALUL	PIPO/FEID PIPO/PSSP6		
HOT (4)	ALRH2/CELAR			

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)				
WARM (3)			CRDO2/HELA4 CRDO2/SYAL	ARRI2/POSE ERNI2/POSE
HOT (4)			CELAR/PSSP6 GLNE3/PSSP6 RHGL/PSSP6	ERMI4-PHOR2 ERSP7-POSE

331A PALOUSE PRAIRIE SECTION

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		DECE		
COOL (2)		PSSP6–ERHE2 FESC–FEID	FEID/SYAL RONU/FEID FEID–KOMA CAHO5–FEID	
WARM (3)	CANE2	LECI4	PSSP6–FEID (CANYON) PSSP6–FEID (PALOUSE) PSSP6–BASA3–POSE	STCO4–POSE
HOT (4)			SPCR–POSE ARLO3–POSE	PSSP6–POSE PSSP6–OPPO–(POSE)

341E LAHONTAN BASIN SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		POTR5/SYOR2/TALL FORB	POTR5/ARTR2	
COOL (2)				
WARM (3)			JUOS/PSSP6 JUOS/ARTR2 JUOS/ARTR2/ORHY	
HOT (4)	POFR2/SAGE2			JUOS JUOS/BARREN JUOS/ARNO4/ROCK JUOS/ARNO4

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		ARTRV/LECI4	CELE3/ARTR2 CELE3/PSSP6	
COOL (2)		ARTRT/FEID ARTRV/PSSP6	ARTRT/PSSP6	
WARM (3)	SALA6/BARREN SALA6/ROWO/GRASS-FORB	ARTRT/LECI4	GRSP-EPVI GRSP-PRAN2 ARNO4/HIJA ARNO4/PSSP6 ATCA2-KRLA2 ATCA2-ARTR2 ARTRW8/PSSP6	ATCO/HIJA GRSP-ARSP5 GRSP-LYAN ARNO4/ORHY ARNO4/STCO4 ATCA2/ORHY ARTRW8-ATCO
HOT (4)	SAEX	SAVE4-CHNA2	ALOC2 ATCO-ARSP5-SAVE4 ATCO-KRLA2 SAVE4 SAVE4 (DUNE) KRLA2 ATCA2/SPAI	ATCO ATCO/ARSP5 ATCO/ARSP5/KRLA2 ATCO/ARSP5/ORHY ATCO-EPNE ATCO/KOAM ATCO-LYSH ATCO/ORHY SAVE4/ATCO/ARSP5 SAVE4/ORHY PSPOP/ORHY

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)	CARO6			
WARM (3)	CANE2	PONE3	LETR5-CAREX JUBA CADO2	
HOT (4)	SCAM2 SCPU3 ELPA3 ELPA3-JUBA TYDO TYLA	ELPA3-DISP	DISP SPAI-DIST3 SUMO	ORHY SERIES

342B–E NORTHWESTERN BASIN AND RANGE SECTION: EASTERN PORTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/STAM2 PICEA/COSE16 PICEA/EQAR	ABLA/RIMO2 ABLA/CARU ABLA/ACGL ABLA/MARE11 ABLA/CARO5 ABLA/ACRU2 ABLA/VAGL ABLA/OSCH ABLA/PERA4 ABLA/PHMA5	PSME/MARE11 PSME/CARU POTR5/SHCA	
COOL (2)	ALIN2/COSE16 ALIN2/MESIC FORB ALIN2/MESIC GRAMINOID	PSME/ACGL PSME/OSCH POTR5/AMAL2–SYOR2/TALL FORB	PSME/SYOR2 PSME/PHMA5 POTR5/TALL FORB POTR5/SYOR2/TALL FORB POTR5/SYOR2/THFE POTR5/AMAL2/TALL FORB POTR5/SYOR2/CARU POTR5/AMAL2–SYOR2/CARU	
WARM (3)	BEOC2/COSE16 BEOC2/MESIC FORB	POTR5/WYAM POTR5/THFE POTR5/AMAL2–SYOR2/THFE POTR5/AMAL2/THFE	ACGR3/CARU PSME/CELE3 PIFL2/CELE3 PIFL2/MARE11	PIMO–JUOS/CELE3/PSSP6 JUOS/PUTR2–SYOR2/PSSP6 PIMO–JUOS/ARTRV/PSSP6 PIMO–JUOS/LECI4 PIMO–JUOS/PRVI
HOT (4)	ACNE2/COSE16 ACNE2/EQAR POAN3/BEOC2 POAN3/COSE16 POAN3/ACGR3			JUOS/ARTR2 JUOS/STCO4

342B–E NORTHWESTERN BASIN AND RANGE SECTION: EASTERN PORTION

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	PEFL15/DECE SAWO/CAAQ SAWO/DECE SAWO/MESIC FORB	CELE3/SYOR2	CELE3/PSSP6 ARTRV–SYOR2/FEID ARTRV–SYOR2/BRCA5	ARTRV–SYOR2/PSSP6
COOL (2)	ARCAV2/DECE COSE16/HELA4 SAGE2/CARO6 SAGE2/CAAQ SAGE2/MESIC GRAMINOID SAGE2/MESIC FORB SABO2/MESIC GRAMINOID SABO2/MESIC FORB SABO2/EQAR SABO2/CANE2 SABO2/CACA4 SABO2/CARO6 SABO2/CAAQ	ARTRV/FEID ARTR4/FEID ARTR4/PSSP6	ARTRV/PSSP6 ARTRV/LECI4	ARARL/FEID
WARM (3)	SAEX/MESIC GRAMINOID ROWO	ARTR2/FEID	ARTRW8/PSSP6	ARAR8/FEID
HOT (4)	SAEX/BARREN SAEX/MESIC FORB SAEX/MESIC GRAMINOID	ARTRT/PSSP6 ARTRT/FEID	ATCO/ELEL5 ARNO4/ORHY ARNO4/PSSP6 SAVE4	ARAR8/STTH2 ARAR8/PSSP6 ATCO

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ELQU2 MECI3 CASC12	FEID ELGL FEOV		
COOL (2)	DECE CAAQ CARO6 AGST2 POCU3	FEID–SYAL		
WARM (3)	CANE2 CAMI7 CALA30 JUBA CASI2	PONE3–PULE–ELEL5		PSSP6–STCO4 PSSP6–BASA3–POSE
HOT (4)	TYLA ELPA3		DISP–(SCNE) LECI4 LETR5–POSE	

342B – W

NORTHWESTERN BASIN AND RANGE SECTION: WESTERN PORTION

FORESTS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	POTR5/CAREX	POTR5/SYAL/ELGL	ABCO/MARE11	
COOL (2)	POTR15/COSE16 ALIN2/CAREX ALIN2–POTR5/COSE16 ALIN2/SYAL ALIN2–POTR15/SALIX/CAREX ALIN2–BEOC2/(SALIX)	PIPO/ARPA6	JUOC/ARTR2/FEID JUOC/ARAR8/FEID PIMO/ARTR2 PIMO/CELE3	
WARM (3)	POTR15/COSE16 BEOC2/POTR15/SALIX	PIPO–QUKE SERIES QUKE	JUOC/CELE3/PSSP6 JUOC/FEID JUOC/ARTR2–PUTR2/PSSP6–FEID PIMO–JUOS/ARTR2	PIMO–JUOS/ARAR8 JUOC/PSSP6 JUOC/ARAR8/PSSP6 JUOC/ARTR2/PSSP6
HOT (4)	POFR2/SAGE2 POAN3/COSE16		PIPO/PUTR2/ORHY	JUOC/ARRI2/POSE JUOC/ARAR8/DAUN–POSE JUOS/BARREN JUOS/ARNO4 JUOS/ARNO4/ROCK

SHRUBLANDS (see next page)

HERBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CANI2 CASP5	FEID ELGL FEOV		
COOL (2)	DECE POCU3 CAPR5–CAAQ	FEID–SYAL FEID	JUBA–CARO5	
WARM (3)	CANE2 DECE–CAREX CAMI7	PONE3–PULE–ELEL5 PONE3	PSSP6–POSE CADO2	PSSP6–STCO4 PSSP6–BASA3–POSE
HOT (4)	TYLA ELPA3 ELPA3–JUBA	ELPA3–DISP	DISP–(SCNE) DISP JUBA LECI4 LETR5–POSE SUMO	ORHY SERIES

NORTHWESTERN BASIN AND RANGE SECTION: WESTERN PORTION

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SADR	CELE3/SYOR2 ARTRV-CELE3/ELCA-POSE ARTRV/CAGE2	ARAR8/FEID ARTRV/FEID ARTRV/BRCA5 CELE3/PSSP6-FEID ARAR8-CELE3/PSSP6-POSE PUTR2/FEID	CELE3/ARTR2 ARTR2/FEID
COOL (2)	SABO2-SAGE2 SABO2/CARO6 SABO2-SALE SAGE2-SARI2 SAGE2-SALE SARI2/RIAU SALI SERIES	ARTR4/PSSP6 ARTR4/FEID ARTRW8-PUTR2/PSSP6 ARTRW8-PERA4/FEID ARTRV/STOC2 ARTRV/PSSP6 CELE3/PRVI AMAL2/ARTR2/FEID ARPA6/CEVE-CEPR	CELE3/PSSP6 ARAR8/PSSP6 ARAR8/FEID ARTRW8/PSSP6 ARTRW8/STCO4 ARTRW8/STTH2 ARTRT/PSSP6 ARRI2/PSSP6 ARAR8/POSE	SADO4/PSSP6 ARTRW8-ATCO ARTR2-EPVI
WARM (3)	SALA6/BARREN SALA6/ROWO/GRASS-FORB ARCA13/(ELCA11)-PONE3 ARCA13/LECI4	PUTR2/ORHY ARTR2-PUTR2/ORHY-STCO4 ARTRT/FEID ARTRT/LECI4	ARRI2/POSE GRSP-EPVI GRSP-PRAN2 ATCA2 ATCA2-ARTR2 ATCA2-KRLA2 ATCA2/HIJA ARNO4/HIJA ARNO4/PSSP6 ARNO4/ELEL5	GRSP/ARSP5 GRSP/LYAN GRSP/ORHY GRSP/ARNO4/STSP3 ATCA2/ORHY ATCO/HIJA ARNO4 ARNO4/ORHY ARNO4/STCO4
HOT (4)	SAEX SAEX-SALUL	SAVE4/LECI4 SAVE4/DISP SAVE4/CHNA2	ATCA2/SPAI ALOC2 ATCO-SAVE4 ATCO/ELEL5 ATCO/ARSP5/SAVE4 ATCO-KRLA2 KRLA2/POSE SAVE4 (DUNE) SAVE4 SAVE4/SUNI	ATCO (COMM II) ATCO/ARSP5 ATCO/ARSP5/KRLA2 ATCO/ARSP5/ORHY ATCO-EPNE ATCO/KOAM ATCO-LYSH ATCO/ORHY ATCO/TEGL SAVE4/ATCO/ARSP5 SAVE4/ORHY SAVE4/ELEL5 PSPOP/ORHY

342C OWYHEE UPLANDS SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/STAM2	ABLA/CLUN2 ABLA/VAGL	ABLA/CAGE2 ABLA/VASC	
COOL (2)	POTR5/SYAL/ELGL POTR5/CAREX	ABGR/CLUN2 PSME/OSCH PSME/SYAL ABGR/VAGL	ABGR/CARU ABGR/ACGL ABGR/SPBE2 ABGR/VACE PSME/CARU PSME/CAGE2 PSME/PHMA5 PSME/SPBE2	
WARM (3)	POTR5/SASC		PIPO/SYAL	PIPO/SYOR2 PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 PSME/FEID PSME/PSSP6 JUOC/ARTRV JUOC/CELE3/PSSP6
HOT (4)	ALRH2/AMAL2 ALRH2/BEOC2 ALRH2/CELAR ALRH2/PHLE4 ALRH2/SACE3 ALRH2-POTR15 POTR5 SERIES		JUOC/CELE3-SYOR2 JUOC/CELE3/CAGE2 JUOC-PIPO/PUTR2	JUOC/PSSP6 JUOC/FEID JUOC/ARAR8/PSSP6 JUOC/ARTR2/PSSP6

342C OWYHEE UPLANDS SECTION

SHRUBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CELE3/SYOR2 CELE3/CARU ARTRV-CELE3/ELCA-POSE ARTRV/CAGE2 ARTRV-SYOR2/FEID	PHMA5-SYAL ARTRV/BRCA5 ARTRV/FEID PUTR2/FEID ARPA6/CEVE-CEPR ARTRV/LECI4	PUTR2/ORHY PUTR2/STCO4 PUTR2/PSSP6 ARTR2/FEID ARAR8/FEID	
COOL (2)	ARCA13/CANE2-POCU3	ARTRV/PSSP6 ARTRT/FEID CELE3/PSSP6 ARTRW8-PERA4/FEID	ARTRW8/PSSP6 ARTRW8/STCO4 ARTRW8/STTH2 ARTRT/PSSP6 ARTR2/STCO4 ARAR8/PSSP6	ARNO4/POSE ARNO4/PSSP6
WARM (3)	ARCA13/(ELCA11)-PONE3	GLNE3/PSSP6 ARTRT/FEID ARTRT/LECI4 CELAR/PSSP6	ARAR8/POSE ARRI2/POSE ERSP7-POSE ERTH4-POSE	ATCO-ARSP5-SAVE4
HOT (4)	ARCA13/LECI4 ARCA13/MURI		ATCO-SAVE4 SAVE4/DISP SAVE4/LECI4 SAVE4/SUNI	ATCO/ORHY ATCO/PSSP6 KRLA2/POSE ATCO/ELEL5

HERBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)	CAAQ CARO6	FEID-KOMA	PSSP6-FEID (CANYON)	
WARM (3)	CANE2	LECI4 (BOTTOMLANDS)	PSSP6-BASA3-POSE	
HOT (4)		DISP-(SCNE) JUBA	PSSP6-OPPO-(POSE)	

342D SNAKE RIVER BASALTS SECTION

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)		PIFL2/PUTR2 JUOS/PUTR2–SYOR2/PSSP6		
COOL (2)	POAN3/COSE16		JUOS/ARTR2	
WARM (3)		JUOS/PSSP6		
HOT (4)				

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ALIN2/RIHU	ARTRV/FEID ARTRV/PSSP6 ACGR3/CARU		
COOL (2)	PEFL15/DECE ALIN2/COSE16 SAGE2/CARO6 SAGE2/MESIC FORB SAGE2/DECE SAGE2/MESIC GRAMINOID	PUTR2/(PSSP6)–FEID	PUTR2/CHNA2 CHNA2/LEFL4–PSLA3	ARARL/FEID
WARM (3)	SABO2/CARO6 SABO2/MAST4 SABO2/CAAQ	ARTR2/FEID ARTR2/PSSP6 ARTR2/STCO4 ARCA13/MURI PUTR2/PRVI	ARTR2/STCO4 ARTRT/PSSP6 ARTRW8/STTH2 ARTRW8/PSSP6 ARTRW8/STCO4	ARAR8/POSE ARAR8/PSSP6
HOT (4)	SAEX			ATCO/ORHY ATCO/PSSP6 KRLA2/POSE EROV ARNO4/POSE

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)	CARO6 CAAQ CASI2		LEFL4	
WARM (3)	CANE2 ELPA3 JUBA SCAC	PASM		
HOT (4)				

342H HIGH LAVA PLAINS SECTION

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	POTR5/SYAL/ELGL ALIN2-POTR5/COSE16 SAGE2-SARI2 SAGE2-SALE ALIN2/COSE16 SABO2/CARO6 ALIN2-BEOC2/(SALIX) SABO2-SAGE2	PIPO/CARU PIPO/CAGE2 ABGR/CARU PSME/SYAL PIPO-PSME/PUTR2 PSME/VAGL	JUOC-PIPO/PUTR2/(PSSP6)-FEID	
COOL (2)	SARI2/RIAU POTR15/CIDO BEOC2/CRDO2 BEOC2-POTR15/SALIX		JUOC/ARTR2-PUTR2/PSSP6-FEID	
WARM (3)	PRVI-SALIX/ROWO SAAM2-SAFL14-SALUL/CAREX SAAM2-SAEX-SALUL CRDO2/SYAL CRDO2/ROWO POTR15/COSE16		JUOC/POSE-STOC2	JUOC/ARAR8/FEID JUOC/ARTR2/FEID JUOC/FEID
HOT (4)	POTR15/SAEX		JUOC/ARTR2/CAFI	JUOC/ARRI2/POSE JUOC/ARTR2/PSSP6 JUOC/ARAR8/PSSP6 JUOC/PSSP6

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CELE3/PSSP6-FEID PUTR2/(PSSP6)-FEID			
COOL (2)		ARTR2/FEID ARAR8/FEID		
WARM (3)		CELE3/PSSP6 ARTRV/STOC2 CELAR/PSSP6 ARTRW8-PUTR2/PSSP6 ARRI2/PSSP6	ARTRW8/STTH2 ARTRW8/PSSP6 ARAR8/PSSP6	ERDO-POSE ERSP7-POSE
HOT (4)	SAVE4/DISP ARCA13/LECI4 SAEX SAEX-SALUL	ARTR2/LECI4	ARAR8/POSE ARRI2/POSE ARTRW8/STCO4	SADO4/PSSP6

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CANE2			
COOL (2)		PSSP6–FEID(CANYON)		
WARM (3)			PSSP6–BASA3–POSE PSSP6–POSE(LITHOSOL) PSSP6–ERHE2	LOCO4–POSE (BASE2)–POSE
HOT (4)	LECI4 (BOTTOMLANDS) DISP–(SCNE)		PSSP6–OPPO–(POSE)	

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	POTR5/SYAL PIPO–PSME ALIN2			
COOL (2)		PSME/SYAL PSME/PHMA5 PSME/CARU	PIPO–PSME/PSSP6	
WARM (3)	ALRH2			
HOT (4)	POTR15/COSE16			PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 JUOC SERIES QUGA4 SERIES

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)	CRDO2/ROWO	PUTR2/FEID ARTR4/FEID SYAL–RONU	PUTR2/PSSP6 ARTR4/PSSP6	PUTR2/STCO4 ARTR4/STCO4
WARM (3)	SAEX	ARTR2/FEID	ARTR2/PSSP6 ARRI2/PSSP6 RHGL/PSSP6	ARTR2/STCO4 PUTR2/ORHY
HOT (4)			SAVE4/DISP ARTRT/FEID ARTRT/PSSP6	KRLA2/POSE GRSP/POSE ARTR2/POSE ARRI2/POSE ERSP7–POSE

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	FEID–KOMA FEID–SYAL RONU/FEID			
COOL (2)		PSSP6–FEID (PALOUSE)		
WARM (3)		PSSP6–FEID (CANYON)	PSSP6–POSE (LITHOSOL)	
HOT (4)		LECI4 (BOTTOMLANDS)	DISP–(SCNE)	LOCO4–POSE STCO4–POSE DAUN–POSE ARLO3–POSE

M242C EASTERN CASCADES SECTION

FORESTS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/LEGL ABLA/RHAL2	ABLA/PHEM LALY/VADE TSME/PHEM-VADE	TSME/XETE TSME/VASC TSHE/ARNE TSME/LUHI ABLA/LUHI ABLA/VAMY2 ABLA/VASC PICO/VASC PICO/XETE	PIAL/CARU PIAL/LUGLH LALY/LUGLH PIAL-PICO/PELA7 PICO/CAPE6
COOL (2)	ABLA/MEFE ABLA/TRCA3 PIEN/EQAR ABAM/OPHO ABGR/POPU3 TSHE/OPHO THPL/OPHO	ABAM/CLUN2 PIEN/CLUN2 ABLA/LIBO3 ABAM/ACCI ABAM/ACTR ABAM/VAAL ABAM/GASH ABGR-PIEN/MAST4 ABGR/VAME/CLUN2 ABGR/VAME THPL/ACTR TSHE/ACTR TSHE/RHMA3 ABCO-PIPO/CAPE6	ABAM/XETE TSME/RULA2 ABAM/VAME ABCO-ABSH/CHUM ABSH/CAPE6 ABSH-TSME/ARNE TSHE/ARNE TSHE/XETE ABCO/CEVE ABCO-PIPO/RIVI3 ABCO-PILA-PIPO/ARPA6 ABCO-PICO/CAPE6-STOC2 PICO/CAPE6 PSME/ARUV	ABLA/CARU ABLA/CAGE2 ABGR/CAGE2 PIPO-PSME/ARNE ABGR/ARNE PSME/HODI PSME/SPBE2 PICO/STOC2 PICO/CAGE2 PICO/CEVE PSME/ARUV-PUTR2 PICO/ARTR2 PICO/ARTR2/FEID PICO/ARTR2/STOC2 PICO/FEID PICO/PUTR2/STOC2 PICO/PUTR2/CAPE6 PICO/PUTR2-RICE
WARM (3)	PICO/CAREX WETLAND PICO-POTR5/VAUL TSHE/LIBO3	ABGR/CACH6 ABGR/ACTR ABGR/CLUN2 ABGR/ACCI ABGR/LIBO3 ABGR/PAMY TSHE/MANEN ABGR/MANEN PICO/PUTR2 PICO/ARUV ABCO/CACH6	ABGR/TRLA6 ABGR/SYAL ABGR/CARU ABGR/SPBE2 PSME/SYAL PSME/CAGE2 PSME/CARU ABCO-PIPO/ARPA6-MANEN PICO/FEID ABCO/CEVE ABCO/SYAL	ABGR/HODI PSME/FEOC PIPO-PSME/PUTR2 PIPO-PSME/ARPA6-CEVE PIPO-PSME/PEFR3 PIPO/ARPA6 PIPO/ASDE6 ABCO-CADE27-PIPO/AMAL2 ABCO/ARPA6
HOT (4)		PIPO/PUTR2-FEID PIPO/ARPA6-PUTR2 PIPO-QUGA4/SYAL QUGA4/ELGL PIPO/CEVE-PUTR2 PIPO/PUTR2/CAPE6 PIPO/ARTRV/PONE2	PIPO-QUGA4/PUTR2 PIPO-QUGA4/BASA3 PIPO-QUGA4/CAGE2 QUGA4/CAGE2 QUGA4/SYAL QUGA4/FEID PIPO/PUTR2/STOC2 PIPO/WYMO	JUOC/ARTR2-PUTR2/PSSP6-FEID

M242C EASTERN CASCADES SECTION

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		ALVIS CAME7–PHEM	PUTR2/CAPE6–STOC2	ARTRV/CAGE2 ARTRV/STOC2
COOL (2)	SABO2–SAGE2/CAAN15 SABO2/CARO6 SABO2–SAGE2 SABO2–SALE SAGE2–SALE VAOC/CAAQD		PUTR2/FEID ARTR4/FEID	ARTRV/FEID
WARM (3)			CELE3/PSSP6–FEID ARTR2/FEID ARAR8/FEID	ARTRV/PSSP6
HOT (4)		ARCA13/(ELCA11)–PONE3 ARCA13–ARTRV/POCU3	ARTRW8–PUTR2/PSSP6 ARAR8–PUTR2/PSSP6–FEID	ARTRW8/PSSP6 ARTRW8/STTH2 ARAR8/PSSP6 ARAR8/POSE

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CANI2 CASC10–GERO2	CASP5	CABR12 FEVI FEOV	CAPU DAIN
COOL (2)	CASI2 CALE4 CALA11 CARO6	DECE	POCU3 PONE3	
WARM (3)	CANE2		FEID–HICY	
HOT (4)	SCAC TYLA		PSSP6–FEID (PALOUSE)	PSSP6–POSE PSSP6–BASA3–POSE

M261D SOUTHERN CASCADES SECTION

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		TSME/PHEM–VADE TSME/JUPA TSME/VASC ABSH/VAME ABSH/CAPE6 ABSH/PENST	ABCO–ABSH/CHUM ABSH–TSME/ARNE	PIAL SERIES PICO/ARNE
COOL (2)	TSHE/VAME/LIBO3 ABAM–ABCO/MANEN	ABCO/RUNI2 ABCO/VAME ABCO/ACGL ABCO/AMAL2–COCO6 ABCO/AMAL2/ANDE3	ABCO/CHUM ABCO/CACH6 ABCO/CEVE ABCO–PSME/MAPI3 ABCO–PIPO/CEVE	
WARM (3)	PIPO/AMAL2–MARE11 ABCO/MANEN	PIPO–PIJE/MARE11 PIPO–PSME/PUTR2 ABCO–PILA–PIPO/ARPA6 ABCO–CADE27–PIPO/AMAL2 CADE27–PSME/CACH6 PILA–PSME/CACH6 PIJE–QUKE/POSE PIJE–QUKE/RHTR	PIPO–PIJE/STCOL PIPO/ARPA6–PUTR2 PIPO/ARPA6	CUPBAK
HOT (4)	TSHE/MANEN	PIPO–QUKE PIPO–QUWI JUOC–PIPO–QUGA4/CECU/FEID QUGA4/CECU/FEID QUGA4/TODI–SYAL/ELGL	PIPO/STCO4 PIPO/PUTR2 PIPO–QUGA4/PUTR2 PIAT SERIES	JUOC/ARTRV JUOC/ARAR8/PSSP6 JUOC–QUGA4 QUDO

SHRUBLANDS & HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ALIN2		HODI	
COOL (2)	DECE CANE2 CARO6	CEVE	CELE3/FEID	
WARM (3)	SALE	QUVA ARPA6 SERIES	QUBR	ARTR2 SERIES PSSP6
HOT (4)	VERNAL POOLS		ARVI16–CECU/FEID–STLE2 CECU SERIES DACA3 STLE2	NAPU

M261G MODOC PLATEAU SECTION

FORESTS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	PICO/VACE PICO/ARTR2/FEID PICO/ARTR2/STOC2	ABSH/CAPE6 PICO SERIES ABCO/CACH6 ABCO/CEVE	ABSH-TSME/ARNE ABSH/CACH6 ABSH/PENST PIWA/SYLO/PSJA PIWA/ARNE	PIAL/STCA PIAL/PEGR PIAL/ARAC
COOL (2)	POTR15 SERIES	ABCO/SYAL ABCO/SYMO ABCO/MARE11 ABCO-PIPO/SYMPH	PIJE/PUTR2 PIJE/ARTRV	
WARM (3)	ABCO-CADE27-PIPO/AMAL2	PIPO-PIJE/FRRU PIPO-PIJE/MARE11 ABCO-PIPO/CEVE ABCO-PIPO/PUTR2	PIPO-PIJE/PUTR2 PIPO-PIJE-CADE27 PIPO-PIJE/STCOL PIPO/CEVE-PUTR2 PIPO/ARPA6-PUTR2 PIPO/PUTR2/ORHY PIPO/CELE3-PUTR2	
HOT (4)			PIPO/ARTR2/STIPA PIPO-QUGA4 PIPO/PUTR2 PIPO/CELE3/PSSP6 PIPO/ARTR2-PUTR2 JUOC-PIPO/PUTR2/(PSSP6)-FEID	JUOC-PIPO-QUGA4/CECU/FEID JUOC/ARNO4 JUOC/ARAR8/PSSP6 JUOC/ARTRV

SHRUBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	BEGL-SALIX	CELE3/FEID ARTRV/FEID		ERDI LEPU
COOL (2)	SABO2-SALE SAGE2-SARI2	CELE3/PSSP6 ARPA6/CEVE-CEPR CEVE	ARAR8/FEID ARTR2/FEID	ARNO4/POSE ARAR8/POSE
WARM (3)	SALE/LECI4	ARCA13/CANE2-POCU3 ARCA13/MURI ARCA13/FEID	PUTR2/FEID PRSU	CECU-CEMOG-PRSU ARAR8/PSSP6 ARTRW8/PSSP6 ARTRW8/STTH2
HOT (4)	SAEX	SAVE4/DISP SAVE4/LECI4 ARTR2/LECI4	CECU/PSSP6	ATCO-SAVE4

M261G MODOC PLATEAU SECTION

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASP5 CANI2			
COOL (2)	CABR12 CALA30 CALA11 CASI2 CAAQ DECE CANE2	PONE3		
WARM (3)		POCU3 LETR5-POSE	FEID - CA	PSSP6
HOT (4)	SCAC SCVA TYLA	LECI4 DISP	STTH2	POSE

M331A YELLOWSTONE HIGHLANDS SECTION

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	PIEN/CADI6 ABLA/CACA4 PIEN/CALE4	ABLA/LUGLH PIEN/GATR3	ABLA-PIAL/VASC PIEN/VASC ABLA/VASC	PIEN/ARCO9 PIEN/HYRE70 PIAL/VASC PIAL/CARO5 PIAL/JUCO6 PIAL/CAGE2
COOL (2)	PIEN/COSE16 PIEN/EQAR POTR5/CACA4	ABLA/THOC PIEN/LIBO3 PICEA/LIBO3 ABLA/ACRU2 ABLA/LIBO3	ABLA/VAGL ABLA/SYAL ABLA/CARU PSME/VAGL	ABLA/ARCO9 ABLA/JUCO6 ABLA/CARO5 PICO/PUTR2
WARM (3)	POTR5/COSE16 POTR15/COSE16	PSME/OSCH ABLA/SPBE2 ABLA/ACGL	PSME/SYAL PSME/CARU	PSME/JUCO6 PSME/ARCO9 PSME/FEKI2 PIEN/JUCO6
HOT (4)		PSME/SPBE2 PSME/ACGL	PSME/PHMA5 PIEN/PHMA5 PICEA/PHMA5 ACGR3/CARU	PIFL2/JUCO6 PIFL2/FEID PIFL2/FEKI2 PSME/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAWO/CAAQ SAWO/DECE SAPL2/CAAQ-CARO6 SARE2/CALE4 BEGL/CARO6 KAMI/CASC12			ARART/FEID
COOL (2)	SAGE2/CACA4 SAGE2/CARO6 SACA4/CARO6	ARTRV-SYOR2/FEID ARCA13/PASM ARCA13/FEID PEFL15/DECE	ARTRV/FEID ARTRV/BRCA5 ARTR4/FEID	ARTRV/PSSP6 ARTR4/PSSP6
WARM (3)	SADR SABE2 COSE16	ARTRT/PASM	ARTRT/PSSP6 ARTRT/FEID ARPE6/FEID CELE3/PSSP6	
HOT (4)				ARNO4/PSSP6

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASC12 CACA4	MOIST ALPINE TURF	DRY ALPINE TURF	
COOL (2)	CARO6 CAAQ CALI7 CALA11 ELQU2 GLBO	DECE SETR FEID–DECE	FEID–ELTR7 FEID–CAFI	
WARM (3)	CASI2 CANE2 ELPA3 SCAC	FEID–STRI2	FEID–PSSP6	PSSP6
HOT (4)	TYLA		PSSP6–PASM	STCO4–BOGR2 PSSP6–BOGR2 PSSP6–POSE

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	PIEN/CALE4 PIEN/CADI6 PIEN/CACA4 ABLA/CACA4	PIEN/GATR3 ABLA/VASC PIEN/LIBO3 ABLA/ARLA8	PIEN/VASC PIAL/VASC PIAL/CAGE2 PIAL/JUCO6 PIAL/CARO5	PICO/ARCO9 PIEN/RIMO2 PIEN/JUCO6
COOL (2)	PIEN/COSE16 PIEN/EQAR POTR15/COSE16	ABLA/ACRU2 ABLA/LIBO3 ABLA/THOC ABLA/OSCH POTR5/SYOR2/CARU POTR5/SYOR2/TALL FORB POTR5/SYOR2/THFE POTR5/SYOR2/CARO5 POTR5/SYOR2/BRCA5 POTR5/AMAL2-SYOR2/BRCA5 POTR5/AMAL2-SYOR2/THFE POTR5/AMAL2-SYOR2/CARU POTR5/AMAL2-SYOR2/TALL FORB POTR5/RUPA ABLA/RIMO2	ABLA/PHMA5 ABLA/VAGL ABLA/SYAL ABLA/CARU ABLA/PERA4 PICO/VASC PICO/SPBE2 PICO/VAGL PICO/CARU	ABLA/ARCO9 ABLA/CARO5 POTR5/SASC
WARM (3)	POAN3/COSE16	PSME/ARCO9 PSME/SYOR2 PSME/OSCH ABLA/ACGL ABLA/SPBE2 POAN3/ACGR3 POTR5/THFE POTR5/SHCA	PSME/CARU PSME/SYAL PSME/VAGL POTR5/AMAL2/TALL FORB POTR5/AMAL2/THFE POTR5/CARU POTR5/BRCA5	PSME/JUCO6 ABLA/MARE11 ABLA/JUCO6 POTR5/WYAM POTR5/TALL FORB PSME/FEKI2 PIFL2/FEKI2 PIFL2/FEID PIFL2/CELE3
HOT (4)		PSME/SPBE2 PSME/ACGL	PSME/PHMA5 POTR5/JUCO6/CAGE2 POTR5/JUCO6/LUAR3	PSME/CELE3 PSME/MARE11 POTR5/ARTR POTR5/STCO4 JUOS/PSSP6 PSME/FEID

SHRUBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAWO/CAAQ SAWO/CARO6 SAWO/CANE2 SAWO/DECE SAWO/MESIC FORB SAPL2		ARTRV-SYOR2/PSSP6 ARTRV-SYOR2/FEID	
COOL (2)	SAEA SAGE2/POPA2 SAGE2/CARO6 SAGE2/CACA4 SAGE2/MESIC FORB SAGE2/DECE SAGE2/MESIC GRAMINOID ARCAV2/DECE	PEFL15/DECE PEFL15/FEID ARCAV2/FEID	ARTRV/FEID ARTRV/BRCA5 ACGL	PUTR2/PSSP6 ARTRV/PSSP6
WARM (3)	SABO2/CARO6 SABO2/CANE2 SABO2/CACA4 SABO2/EQAR SABO2/POPA2 SABO2/MAST4 SABO2/CAAQ SABO2/MESIC FORB SABO2/MESIC GRAMINOID COSE16/GATR3 ALIN2/RIHU ALIN2/MESIC FORB ALIN2/MESIC GRAMINOID	BEOC2/COSE16 BEOC2/MESIC FORB	ARTR4/PSSP6 ARTR4/FEID ARTRW8/POSE ARTRW8/PSSP6 ARTRW8/STCO4 ARTRT/PSSP6 ARTRT/FEID ARTR2/STCO4	PUTR2/STCO4 CELE3/PSSP6
HOT (4)	SAEX/EQAR SAEX/MESIC FORB SAEX/MESIC GRAMINOID SALU2/CARO6 SALU2/CACA4 COSE16/HELA4		ARAR8/FEID ARNO4/FEID	ARNO4/PSSP6 ARAR8/POSE ARAR8/PSSP6

M331D OVERTHRUST MOUNTAINS SECTION

HERBLANDS

MOISTURE: / TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CAAQ CASI2	CAMI7 CARO6 CANE2 JUBA	DECE	
COOL (2)		MECI3	MESIC FORB	POPA2
WARM (3)	ELPA3			
HOT (4)				LECI4 PSSP6 ORHY SERIES

M331J WIND RIVER SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CALEH2 ABLA/CACA4	ABLA-PIAL/VASC PIAL/VASC	ABLA/ARCO9 PICO/ARCO9 ABLA/JUCO6	PIAL/JUCO6 PIAL/CARO5 PIAL/FEID
COOL (2)	PICEA/EQAR PICEA/CADI6 ABLA/CACA4	PIEN/VASC ABLA/VASC ABLA/ARLA8 PICO/VASC	PICO/CARU PICO/JUCO6	PICO/CARO5 PSME/SPBE2 PICO/FEID
WARM (3)	ABLA/STAM2 POPTRE/COSE16	ABLA/ACRU2	PICEA/PHMA5 PSME/SYAL PSME/MARE11 PSME/CARU	PSME/JUCO6 PSME/SYOR2 PSME/ARCO9
HOT (4)				PIFL2/FEID PIFL2/FEKI2 PSME/FEKI2 PSME/FEID PIFL2/JUCO6

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	KRUMMHOLZ SAPL2/CAAQ SAPL2/CASC12 SARE2/CALE4 PHEM/ANLA3 KAMI/CASC12			
COOL (2)	SABO2/CACA4 SABO2/EQAR SABO2/CAAQ SABO2/CANE2 SADR	ARTRV-SYOR2/FEID	ARTRV/FEID	
WARM (3)	SABE2 SALU2/CACA4 SALU2/CARO6	PUTR2/FEID	ARAR8/FEID ARTR4/FEID	
HOT (4)				ARTRT/PSSP6 ARTRW8/PSSP6 ARTRV/PSSP6

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)		FEID–CASC10 MOIST ALPINE	DRY ALPINE	
COOL (2)		FEID–ELTR7		
WARM (3)			FEID–PSSP6	
HOT (4)				PSSP6–POSE

M332A IDAHO BATHOLITH SECTION

FORESTS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4 ABLA/CABI ABLA/LEGL	ABLA/MEFE LALY-ABLA ABLA/LUGLH	ABLA/CARU ABLA/CLUN2 ABLA/COOC ABLA/LIBO3 ABLA/VACE ABGR/XETE ABLA/VAGL ABLA/XETE	ABLA/CAGE2 ABLA/SPBE2 ABLA/ARCO9 PIAL-ABLA PICO/FEID ABLA/VASC PICO/VASC
COOL (2)	ABLA/STAM2	THPL/ASCA2 THPL/CLUN2 THPL/GYDR THPL/TABR2/ASCA2	ABGR/CLUN2 ABGR/COOC ABGR/ASCA2 ABGR/VACE ABGR/LIBO3 ABGR/TABR2 PSME/VACE	ABLA/ACGL ABGR/ACGL ABGR/VAGL
WARM (3)	THPL/ATFI	THPL/ADPE	PSME/SYAL ABGR/SPBE2 PSME/ACGL PSME/LIBO3 PSME/VAGL ABGR/CARU	PSME/SPBE2 PSME/CAGE2 PSME/PHMA5 PSME/MARE11 PSME/CARU PSME/SYOR2 PIPO/PHMA5 PIPO/SYAL PIPO/SYOR2
HOT (4)		PIPO/CRDO2 POTR15/COSE16		PSME/PSSP6 PSME/FEID PIPO/FEID PIPO/PSSP6 PIPO/PUTR2 PIPO/STCO4

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAWO/CAAQ SAWO/CARO6 SAWO/SWPE-PEGR2 SAPL2/CASC12 SAPL2/CAAQ-CARO6 SACO2/CASC12 BEGL/CARO6			
COOL (2)	SAEA/CAAQ SAEA/CARO6 SABO2/CACA4 SAGE2/CACA4		ARTRV-SYOR2/FEID ARTRV-SYOR2/PSSP6	
WARM (3)	SABO2/CAAQ SABO2/CARO6 SAGE2/CARO6 COSE16/HELA4 ALIN2/COSE16 ALIN2/RIHU COSE16			
HOT (4)	BEOC2			PUTR2/FEID PUTR2/PSSP6 CELE3/FEID CELE3/PSSP6 ARTRV/PSSP6 ARTRV/FEID

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)			GERO2 JUDR-CAREX SPP. ALPINE GRASSLAND	
COOL (2)	CACA4 CAAQ CABU6			
WARM (3)	CANE2 JUBA ELPA3			
HOT (4)				

M332B BITTERROOT VALLEY SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4	ABLA/MEFE	LALY-ABLA ABLA/LUGLH ABLA/VASC ABLA-PIAL/VASC	PIAL SERIES PIAL-ABLA
COOL (2)	PICEA/EQAR THPL/ATFI	ABLA/LIBO3 ABLA/CLUN2 PICEA/GATR3 ABLA/GATR3 PICEA/CLUN2	ABLA/VACE PSME/VAGL ABGR/XETE ABLA/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	ABGR/SETR PICEA/COSE16	ABGR/CLUN2 THPL/CLUN2 ABGR/LIBO3	PSME/CARU PSME/PHMA5 PSME/LIBO3	PSME/SPBE2 PSME/SYAL
HOT (4)	POTR15/COSE16 PSME/COSE16 PIPO/COSE16	POTR15/SAEX	PIPO/SYAL	PIPO/PSSP6 PIPO/PUTR2 PIPO/FEID PSME/FESC PSME/FEID

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAMI/CASC12			
COOL (2)	SAGE2/CAAQ SAGE2/CARO6 SAWO/CAAQ SAGE2/CACA4 BEGL/CARO6	ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16	PEFL15/DECE PEFL15/FEID ARTR2FESC	CELE3/PSSP6
HOT (4)				ARTR2/PSSP6 PUTR2/FEID ARTR2/FEID

HERBLANDS

MOISTURE: / TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASI2 CASC12			
COOL (2)	ELQU2 ELPA3 SETR CALI7 CACA4 CAAQ CABU6 CALA11	DECE–CAREX SP. DECE	FEID–DECE	
WARM (3)	EQFL GLBO CARO6	POPA2 JUBA CANE2	FEID–STRI2 FESC–FEID	
HOT (4)	TYLA PHAR3 PHAU7 SCAC			FESC–PSSP6 FEID–PSSP6 PSSP6–POSE

M332C ROCKY MOUNTAIN FRONT SECTION

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4 PIEN/CACA4 ABLA/LEGL	ABLA/LUGLH ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC ABLA/RIMO2	ABLA/ARCO9 PIAL SERIES PIAL-ABLA ABLA-PIAL/ARUV
COOL (2)	PIEN/GATR3 ABLA/GATR3 ABLA/STAM2 POTR5/CACA4	PICEA/MAST4 ABLA/ACRU2 ABLA/LIBO3 ABLA/CLUN2 ABLA/ALVIS PIEN/LIBO3	ABLA/CARU PSME/VACE PIEN/VACE ABLA/VACE ABLA/VAGL ABLA/XETE	PSME/ARCO9 PICEA/SEST3 PSME/SPBE2 ABLA/CLCOC2
WARM (3)	PIEN/EQAR PIEN/COSE16 POTR5/COSE16	PSME/PHMA5 PSME/LIBO3 POTR5/OSOC	PSME/CARU PSME/SYAL	PIFL2/JUCO6 PSME/JUCO6 PSME/ARUV
HOT (4)	POTR15/COSE16 PSME/COSE16 JUSC/COSE16		PSME/FESC PSME/FEID	PIFL2/PSSP6 PIFL2/FEID

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAPL2/CAAQ SAPL2/CASC12 SARE2/CALE4 KAMI/CASC12	SAAR16/POBI6 PHEM/ANLA3	DROC/CARU3	
COOL (2)	SACA4/CARO6 SAWO/CAAQ ALIN2	ALVIS PEFL15/DECE ARCA13/FEID SAWO/DECE	PEFL15/FEID	ARTRV/PSSP6
WARM (3)	SAGE2/CARO6 SAGE2/CACA4 SALU2/CACA4 BEOC2 SADR SABE2	PEFL15/FESC ARCA13/PASM ROWO	ARTR2/FESC ARTRV/FEID	
HOT (4)	SAEX SALU2/CARO6 COSE16	PRVI SYOC		ARTRW8/PSSP6

M332C ROCKY MOUNTAIN FRONT SECTION

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASC12 CASC12–CALE4	DECE–CAREX CANI2 FEID–CASC10 DECE–CALE4	CASC10–PODI2	CARUD GERO2
COOL (2)				
WARM (3)			FESC–PSSP6 FESC–FEID FEID–PSSP6	
HOT (4)		SPPE PASM	PSSP6–PASM	PSSP6–BOGR2 PSSP6–POSE STCO4–BOGR2

M332D BELT MOUNTAINS SECTION

FORESTS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4 ABLA/LEGL	ABLA/ALVIS ABLA/LUGLH ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC ABLA/RIMO2	ABLA/ARCO9 PIAL SERIES PIAL-ABLA
COOL (2)	PIEN/GATR3 ABLA/GATR3 PIEN/EQAR ABLA/STAM2 POTR5/CACA4	PICEA/MAST4 ABLA/ACRU2 ABLA/LIBO3 PIEN/LIBO3	PSME/VACE PSME/VAGL PICEA/VACE ABLA/VACE ABLA/VAGL ABLA/XETE ABLA/CARU	PSME/ARCO9 PSME/SPBE2 PICEA/SEST3 ABLA//CLCOC2 ABLA/CAGE2
WARM (3)	PSME/COSE16 PIEN/COSE16 POTR15/COSE16 POAN3/COSE16	PIEN/PHMA5 PSME/LIBO3 PSME/PHMA5	PSME/CARU PSME/SYAL PSME/SYOR2	PSME/ARUV PSME/JUCO6 PIFL2/JUCO6
HOT (4)	PIPO/COSE16 JUSC/COSE16	PIPO/PRVI	PSME/FESC PSME/FEID	PIFL2/FEID PIFL2/PSSP6 PIPO/PSSP6 PIPO/FEID PIPO/PUTR2 PIFL2/CELE3 JUSC/PSSP6

SHRUBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAPL2/CAAQ SAPL2/CASC12 SARE2/CALE4 KAMI/CASC12	SAAR16/CALE4 SAAR16/POBI6	DROC/CARU3	
COOL (2)	ALIN2 SAWO/CAAQ SACA4/CARO6	PEFL15/DECE ARCA13/FEID SAWO/DECE ALVIS	PEFL15/FEID PUTR2/FEID	ARTRV/PSSP6
WARM (3)	SAGE2/CARO6 SAGE2/CACA4 SALU2/CACA4 BEOC2 SADR SABE2	PEFL15/FESC ARCA13/PASM ROWO	ARAR8/FEID ARTRV/FEID ARTR2FESC ARTR4/FEID	PUTR2/PSSP6 CELE3/PSSP6
HOT (4)	SAEX SALU2/CARO6 COSE16	SAVE4/LECI4 PRVI SYOC	SAVE4/PASM	ARNO4/PSSP6 ARAR8/PSSP6 ARTRW8/PSSP6 ARTRW8/STCO4

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASC12 CASC12–CALE4	DECE–CAREX CANI2 DECE–CALE4	CASC10/PODI2 CASC10–GERO2	CAEL3
COOL (2)	SETR ELQU2 CACA4 CALI7 CAAP3 CAAQ CASI2	FEID–DECE FEID–ELTR7	FEID–CAFI	FEKI2
WARM (3)	SCAC ELPA3 GLBO EQFL PHAR3 CANE2 CARO6	FEID–STRI2 POPA2	FESC–PSSP6 FESC–FEID FEID–PSSP6	
HOT (4)	TYLA SCMA SCPU3	LECI4 SPPE PASM	PSSP6–PASM	STCO4–BOGR2 PSSP6–BOGR2 PSSP6–POSE

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	PIEN/EQAR PIEN/CADI6 ABLA/CACA4	LALY–ABLA ABLA–PIAL/VASC ABLA/VASC	PIAL/VASC ABLA/RIMO2 ABLA/ARCO9 ABLA/VACE	PIEN/HYRE70 PIAL–ABLA PIAL/FEID ABLA/CLCOC2 PICO/FEID
COOL (2)	ABLA/STAM2 ABLA/MEFE	PIEN/LIBO3 PIEN/GATR3 ABLA/ACGL ABLA/LIBO3 ABLA/THOC	PSME/CAGE2 PSME/SPBE2 ABLA/CARU ABLA/CAGE2 PICEA/SEST3 ABLA/SYAL	PIFL2/JUCO6 PSME/JUCO6 PSME/ARCO9
WARM (3)	POTR15/COSE16	PSME/ACGL POTR5/SHCA POTR5/AMAL2–SYOR2/THFE POTR5/AMAL2–SYOR2/CARU POTR5/THFE	PSME/CARU PSME/MARE11 PSME/PHMA5 PSME/SYAL POTR5/CARU POTR5/SYOR2/CARU POTR5/SYOR2/THFE	PIFL2/CELE3 PSME/CELE3 PSME/SYOR2 PIFL2/FEID PIFL2/FEKI2 PIFL2/PSSP6 PSME/PSSP6 PSME/FEID
HOT (4)	PIFL2/PEFL15/DIST3	POTR5/WYAM	POTR5/STCO4	JUOS/ARNO4 JUOS/ARTR2 JUOS/STCO4 JUOS/LEAM

SHRUBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SACO2/CASC12 PHEM/ANLA3 SARE2/CALE4 SAAR16/CALE4 SAPL2/CAAQ−CARO6 SAPL2/CASC12	DROC SAAR16/POBI6		ARART/FEID
COOL (2)	SABO2/CACA4 SAEA/CAAQ SAEA/CARO6 SAGE2/CARO6 SAGE2/POPA2 SAWO/CAAQ SAWO/CARO6 SAWO/POPA2	ARTR4/FEID ARTRV/FEID ARTRV−SYOR2/FEID	ARTRV−SYOR2/PSSP6 ARTR4/PSSP6 ARTRV/PSSP6	
WARM (3)	ALIN2/COSE16 COSE16/HELA4 SABO2/CAAQ SABO2/CANE2 SABO2/CARO6 SABO2/EQAR SABO2/MESIC FORB		CELE3/PSSP6 ARTRW8/LEAM ARPE6/FEID ARTR2/FEID	ARNO4/FEID ARAR8/PSSP6 ARAR8/LEAM
HOT (4)	BEOC2		ATCO/LEAM	SPAR2−ARFR4−POSE SPAR2−ORSW ARNO4/POSE ARNO4/ORHY ARNO4/LEAM ARTRW8/PSSP6 ATCO/ORHY ATCO/PSSP6

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CACA4 CASC12	FEID–PODI2 FEID–CASC10 JUDR–CAREX SPP.	FEID–ERCA8 CAPU GERO2	CARUD CAEL3–LUAR3
COOL (2)	DECE CAAQ CASI2 DECE–CALE4	FEID–DECE	FEID–FEKI2	FEKI2 FEKI2–CAEL3 FEKI2–PHPU5 FEKI2–POCU3
WARM (3)	CANE2 ELPA3 ELQU2 JUBA		FEID–PSSP6 FESC–FEID	CAST40–POSE
HOT (4)				LEAM–ENNU

M332F CHALLIS VOLCANICS SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4	ABLA/RIMO2	ABLA/VASC PIAL–ABLA	PICO/FEID ABLA/ARCO9
COOL (2)	ABLA/STAM2 PIEN/EQAR	ABLA/LIBO3 ABLA/VACE	ABLA/CAGE2 ABLA/CARU ABLA/SPBE2	PSME/JUCO6 PSME/ARCO9
WARM (3)	POTR15/COSE16	PSME/ACGL	PSME/SYAL PSME/CAGE2 PSME/CARU	PSME/SYOR2 PSME/MARE11
HOT (4)				PIFL2/CELE3 PSME/CELE3 PSME/FEID PSME/PSSP6

SHRUBLANDS

MOISTURE: MP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SACO2/CASC12 SAPL2/CAAQ–CARO6 SAPL2/CASC12 SAWO/SWPE–PEGR2	DROC	ARCA13/FEID	ARART/FEID
COOL (2)	BEGL/CARO6 PEFL15/DECE SABO2/CACA4 SAEA/CAAQ SAEA/CARO6 SAGE2/CACA4 SAGE2/CARO6 SAWO/CAAQ SAWO/CARO6 PEFL15/FEID	ARTRV/FEID ARTR4/FEID ARAR8/FEID ARTR4/PSSP6	CELE3/HODU ARTRV/PSSP6 ARTRV–SYOR2/PSSP6	
WARM (3)	ALIN2/COSE16 ALIN2/RIHU COSE16/HELA4 SABO2/CAAQ SABO2/CARO6		CELE3/PSSP6	
HOT (4)	BEOC2		ARTRW8/POSE	SPAR2–ARFR4–POSE SPAR2–ORSW ARNO4/ORHY ARTRW8/PSSP6 ARAR8/PSSP6 ATCO/PSSP6 ATCO/LEAM

HERBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	CACA4 CASC12	FEID–PODI2 CAPS2 JUDR–CAREX SPP.	FEID–ERCA8 IVGO–ERCA8 IVGO–MIOB2 CARUD GERO2	CAEL3–LUAR3
COOL (2)	DECE CAAQ CASI2 CABU6 SCCE2–CALI DECE–CALE4 AGEX–AGSCS	FEID–DECE	FEID–FEKI2	FEKI2 FEKI2–CAEL3 FEKI2–PHPU5 FEKI2–POCU3
WARM (3)	CANE2 ELPA3 ELQU2 JUBA			LEAM–LUAR3 CAST40–POSE
HOT (4)	SCAM2			LEAM–ENNU

M332G BLUE MOUNTAINS SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)			ABLA/MEFE	ABLA/CAGE2 ABLA/VASC ABLA/PHEM PICO/VASC/CAPE6 TSME/VASC TSME/VAME ABGR/VASC
COOL (2)	ABLA/STAM2 PIEN/CLUN2 ABGR/TABR2 PIEN/EQAR ABGR/SETR	PICO-(POTR5)/SPDO/CAREX	ABLA/TRCA ABLA/CLUN2 ABLA/LIBO3 ABLA/THOC ABGR/ASCA2 ABGR/TRCA ABGR/CLUN2 ABGR/SYAL PICO/ELGL ABLA/RHAL2	ABLA/CARU ABLA/VAME ABLA/ARCO9 ABGR/VAME ABGR/LIBO3 ABGR/COOC2
WARM (3)	PIPO-POTR5/CAREX-(POA)	ABGR/ACGL	PSME/PHMA5 PSME/HODI PSME/SYOR2 PSME/CELE3 PIPO-PSME/PHMA5	ABGR/SPBE2 ABGR/CARU ABGR/CAGE2 PICO/CARU PICO/FEID PICO/PUTR2/FEID PSME/CARU PSME/CAGE2 PSME/VAGL PSME/SYAL PSME/SPBE2 PSME/PSSP6 PIPO-PSME/PUTR2 PIPO/CARU PIPO/CAGE2 PIPO/ELGL PIFL2/JUCO6
HOT (4)			PIPO/ARTRV/PONE2 PIPO/PUTR2/FEID PIPO/CELE3 PIPO/FEID JUOC-PIPO/ARTR2/PSSP6-(FEID-STIPA) JUOC/PSSP6 JUOC/ARAR8/FEID JUOC/ARTR2-PUTR2/PSSP6-FEID JUOC/ARTRV	PIPO/PUTR2/PSSP6 PIPO/PSSP6 JUOC/ARAR8/PSSP6 JUOC/ARRI2/POSE JUOC/ARAR8/DAUN-POSE

SHRUBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)				
COOL (2)	ALIN2–BEOC2/(SALIX)			
WARM (3)		BEOC2/CRDO2 BEOC2/POTR15/SALIX ARCA13/(ELCA11)–PONE3 ARCA13/LECI4	CRDO2/SYAL CRDO2/ROWO ARTRV/FEID PHMA5–SYAL SYAL–RONU	
HOT (4)			CELE3/PSSP6–FEID CELE3/CARU PUTR2/PSSP6–FEID ARTRV/LECI4 ARTRV/CAGE2 ARTRW8/LECI4 ARTR2/FEID ARTRW8–PERA4/FEID ARAR8–PUTR2/PSSP6–FEID ARAR8/FEID ARTR4/FEID SAVE4/DISP SAVE4/LECI4	CELE3/PSSP6 PUTR2/PSSP6 ARTR2/STCO4 ARTRV/PSSP6 ARTRW8/PSSP6 ARTRW8/POSE ARTRW8–PUTR2/PSSP6 ARTR4/PSSP6 ARAR8/PSSP6 ARAR8/POSE CELE3/PSSP6 ARRI2/PSSP6 ARRI2/POSE ARTRW8–ATCO GLNE3/PSSP6 RHGL/PSSP6

HERBLANDS

TEMP: / MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CALA11 CANI2 CASC12 CASP5		FEID FEOV	
COOL (2)		DECE	CAHO5–FEVI FEVI–LUARL5 PSSP6–FEID (PALOUSE)	ELGL PONE3
WARM (3)			FEID–CAHO5 PSSP6–ERHE2 FEID–KOMA FEID–SYAL RONU/FEID	PSSP6–ARLO3–SPCR
HOT (4)		DECE–CAREX	DISP–(SCNE) LECI4 (BOTTOMLANDS) PONE3–PULE–ELEL55	PSSP6–POSE PSSP6–OPPO–(POSE) DAUN–POSE PSSP6–POSE (LITHOSOL) ARLO3–POSE ERST4–POSE ERMI4–PHOR2 ERCO12–POSE

M333A OKANOGAN HIGHLANDS SECTION

FORESTS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4	ABLA/MEFE ABLA/RHAL2 TSME/MEFE TSHE/MEFE TSHE/RHAL2	ABLA-PIAL/VASC ABLA/VASC ABLA/XETE ABLA/LUGLH TSME/XETE TSME/LUGLH	PIAL/CARU ABLA/CARU ABLA-PIAL/ARUV
COOL (2)	ABLA/TRCA ABLA/STAM2 ABLA/OPHO THPL/OPHO PIEN/EQAR	TSME/CLUN2 TSHE/CLUN2 ABLA/CLUN2 ABLA/LIBO3 ABLA/COCA13 TSHE/ARNU2 TSHE/XETE TSHE/RUPE THPL/VAME THPL/LIBO3	PSME/VACCI PSME/VACE ABGR/VACE ABLA/VACE ABGR/XETE	PSME/CARU PSME/SPBE2 PSME/ARUV
WARM (3)	TSHE/GYDR THPL/ARNU2 THPL/GYDR THPL/ATFI	ABGR/PHMA5 ABGR/LIBO3 ABGR/CLUN2 ABGR/TABR2 ABGR/PAMY THPL/CLUN2 THPL/ASCA2 PSME/LIBO3	PSME/PHMA5 PSME/PHMA5-LIBO3 PSME/HODI PSME/SYAL	PSME/CARU PIPO-PSME/PSSP6
HOT (4)	POTR5/COSE16 POTR15/COSE16 ALIN2-POTR5/BEGL-RIBES/CAREX		PIPO/FEID PIPO/SYAL PIPO/PHMA5 PSME/SYOR2 PSME/FEID PIPO/FESC	PIPO/PSSP6 PIPO/PUTR2 PIPO/PUTR2/FEID PIPO/PUTR2/ORHY PIPO/PUTR2/PSSP6

M333A OKANOGAN HIGHLANDS SECTION

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	BEGL/CARO6	CAME7–PHEM		
COOL (2)	ALVIS			ARTRV/PSSP6
WARM (3)	ALIN2 COSE16 SPDO		PUTR2/FEID ARTR4/FESC ARTR4/FEID	
HOT (4)		SAVE4	PUTR2/PSSP6 PUTR2/STCO4 ARTR4/STCO4 ARTR4/PSSP6	ARTR2/STCO4 ARTRT/PSSP6

HERBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CANI2 CAPS2	FEVI	FEVI–FEID	
COOL (2)	CARO6 CAAQ CALA30 CALA11 CACA4		FEID–FESC	
WARM (3)	SCAC NULUP	JUBA	FEID–ERHE2	
HOT (4)				

M333B FLATHEAD VALLEY SECTION

FORESTS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	ABLA/CACA4 TSME/STAM2 PIAL SERIES	ABLA/LUGLH TSME/MEFE ABLA/MEFE TSME/LUGLH TSHE/MEFE	ABLA/VASC LALY-ABLA ABLA-PIAL/VASC	PIAL-ABLA
COOL (2)	PICEA/EQAR ABLA/OPHO TSME/STAM2 ABLA/STAM2 THPL/ATFI	ABLA/LIBO3 THPL/GYDR TSME/CLUN2 ABLA/CLUN2 TSHE/GYDR PICEA/GATR3 PICEA/CLUN2	TSME/XETE ABLA/VACE ABGR/XETE ABLA/XETE TSHE/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE16	THPL/CLUN2 THPL/ASCA2 TSHE/CLUN2 ABGR/LIBO3 ABGR/CLUN2	PSME/CARU PSME/PHMA5 PSME/LIBO3 PSME/SYAL ABGR/PHMA5 PSME/VAGL	PSME/ARUV
HOT (4)	POTR5/COSE16 POTR15/COSE16 PICEA/LYAM3 PSME/COSE16 PIPO/COSE16	POTR5/OSOC	PIPO/SYAL	PIPO/PSSP6 PIPO/FEID PSME/FESC PSME/PSSP6 PSME/FEID

SHRUBLANDS

MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
TEMP: COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CACA4 BEGL/CARO6	SAWO/DECE ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PEFL15/FESC PEFL15/DECE ARTR2/FESC	
HOT (4)		CRDO2		ARTR2/PSSP6 ARTR2/FEID

M333B FLATHEAD VALLEY SECTION

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CACA4 SETR CASI2 CASC12	ALPINE RNGLND		
COOL (2)	ELQU2 ELPA3 CARO6 CABU6 CAAQ CALA11	DECE-CAREX DECE	FEID-ELTR7	
WARM (3)	PHAU7 EQFL GLBO CAAP3	POPA2 JUBA CANE2	FEID-DECE FEID-STRI2	FESC-FEID
HOT (4)	TYLA SCAC		FESC-PSSP6 FEID-PSSP6	PSSP6-POSE

M333C NORTHERN ROCKIES SECTION

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA	ABLA/MEFE	ABLA/LUGLH LALY–ABLA	ABLA–PIAL/VASC PIAL–ABLA ABLA/VASC
COOL (2)	PICEA/EQAR ABLA/OPHO THPL/ATFI	ABLA/LIBO THPL/GYDR TSME/CLUN ABLA/CLUN PICEA/GATR PICEA/CLUN	ABLA/VACE PSME/LIBO ABGR/XETE ABLA/XETE ABLA/VAGL	PICEA/VACE PSME/VACE
WARM (3)	THPL/OPHO ABGR/SETR PICEA/COSE	THPL/CLUN THPL/ASCA ABGR/LIBO ABGR/CLUN	PSME/CARU PSME/PHMA ABGR/PHMA PSME/VAGL	PSME/SYAL
HOT (4)	POTRE/COSE POTRI/COSE PICEA/LYAM PSME/COSE	POTRE/OSOC		

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CACA4 BEGL/CARO6	SAWO/DECE ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PEFL15/FESC PEFL15/DECE	
HOT (4)				

M333C NORTHERN ROCKIES SECTION

HERBLANDS

MOISTURE: TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CACA4 SETR CASI2 CASC12	ALPINE RNGLND		
COOL (2)	ELQU2 ELPA3 CARO6 CABU6 CAAQ CALA11	DECE–CAREX DECE	FEID–ELTR7	
WARM (3)	PHAU7 EQFL GLBO CAAP3	POPA2 JUBA CANE2	FEID–DECE FEID–STRI2	FESC–FEID
HOT (4)	TYLA SCAC			FESC–PSSP6 FEID–PSSP6

M333D BITTERROOT MOUNTAINS SECTION

FORESTS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	ABLA/CACA4 TSME/STAM2	ABLA/LUGLH TSME/LUGLH TSME/MEFE ABLA/MEFE LALY-ABLA	ABLA/VASC ABLA-PIAL/VASC	PIAL PIAL-ABLA
COOL (2)	ABLA/GATR3 PICEA/GATR3 THPL/OPHO ABLA/OPHO THPL/ATFI	ABLA/LIBO3 THPL/GYDR ABLA/CLUN2 TSHE/GYDR ABGR/TABR2 TSME/CLUN2 ABGR/CLUN2 PICEA/CLUN2	TSME/XETE ABLA/VACE PSME/LIBO3 ABGR/XETE ABLA/XETE TSHE/XETE ABLA/VAGL	PSME/VACE PICEA/VACE
WARM (3)	ABGR/SETR PICEA/COSE16	THPL/ADPE TSHE/ASCA2 TSHE/CLUN2 ABGR/LIBO3 ABGR/ASCA2	PSME/CARU PSME/PHMA5 ABGR/PHMA5 ABGR/SPBE2 PSME/SPBE2 PSME/VAGL	PSME/SYAL
HOT (4)	POTR15/COSE16 PICEA/LYAM3 PSME/COSE16 PIPO/COSE16	POTR15/CRDO		PIPO/PSSP6 PIPO/FEID PIPO/SYAL PSME/PSSP6 PSME/FEID

SHRUBLANDS

TEMP: \ MOISTURE:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	SAPL2/CASC12 SACA4/CARO6 KAMI/CASC12	PHEM/ANLA3		
COOL (2)	SAGE2/CAAQ SAGE2/CARO6 SAWO/CAAQ SAGE2/CACA4 BEGL/CARO6	ALIN2 ALVIS SABE2		
WARM (3)	SALU2/CARO6 SALU2/CACA4 SADR	SALUL COSE16 SAEX	PUTR2/FESC ARTR4/FESC PEFL15/DECE ARTR2/FESC	
HOT (4)		CRDO2		ARTR2/PSSP6 ARTR2/FEID

M333D BITTERROOT MOUNTAINS SECTION

HERBLANDS

TEMP:	WET (1)	MOIST (2)	DRY (3)	VERY DRY (4)
COLD (1)	CASC12-CALE4 SETR CASI2 CASC12	DECE-CALE4		
COOL (2)	ELQU2 ELPA3 CACA4 CABU6 CAAQ CALA11	DECE-CAREX DECE	FESC-DECE	
WARM (3)	EQFL GLBO CARO6	POPA2 JUBA CANE2	FEID-STRI2	FESC-FEID
HOT (4)	TYLA PHAU7 SCAC		FESC-PSSP6 FEID-PSSP6	PSSP6-POSE

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APPENDIX 4. Regional level PV classification: list of plant associations found within each regional class.

REGIONAL FOREST CLASS 1,1; n = 18

ABLA/CALEH2
ABLA/CABI
ABLA/CACA4
ABLA/LEGL
ABLA/LUGLH
ABLA/MEFE
ABLA/RHAL2
ABLA/RHAL2
LALY–ABLA
PIEN/CACA4
PIEN/CADI6
PIEN/CALE4
PIEN/EQAR
TSHE/MEFE
TSHE/RHAL2
TSME/LUGLH
TSME/MEFE
TSME/STAM2

REGIONAL FOREST CLASS 1,2; n = 20

ABLA–PIAL/VASC
ABLA/ALVIS
ABLA/ARLA8
ABLA/LUGLH
ABLA/MEFE
ABLA/PHEM
ABLA/VASC
ABLA/XETE
LALY–ABLA
LALY/VADE
PIEN/VASC
PICO–POTR5/SPDO/CAREX
PIEN/GATR3
PIEN/LIBO3
PIAL/VASC
PICO/VASC
TSME/LUGLH
TSME/MEFE
TSME/PHEM–VADE
TSME/XETE

REGIONAL FOREST CLASS 1,3; n = 34

ABGR/VASC
ABLA–PIAL/VASC
ABLA/ARCO9
ABLA/CAGE2
ABLA/JUCO6
ABLA/LUGLH
ABLA/PHEM
ABLA/RIMO2
ABLA/SPBE2
ABLA/VACE
ABLA/VAMY2
ABLA/VASC
ABSH/CAPE6
ABSH/PENSTEMON
ABSH/VAME
LALY–ABLA
PIAL–ABLA
PIAL/CAGE2
PIAL/CARO5
PIAL/JUCO6
PIAL/VASC
PICO/ARCO9
PICO/FEID
PICO/VASC
PICO/VASC/CAPE6
PICO/XETE
PIEN/VASC
TSHE/ARNE
TSME/JUPA
TSME/LUGLH
TSME/PHEM
TSME/VAME
TSME/VASC
TSME/XETE

REGIONAL FOREST CLASS 1,4; n = 31

ABLA-PIAL/ARUV
ABLA-PIAL/VASC
ABLA/ARCO9
ABLA/CARO5
ABLA/CARU
ABLA/CLCOC2
ABLA/JUCO6
ABLA/VASC
LALY/LUGLH
PIAL
PIAL-ABLA
PIAL-PICO/PELA7
PIAL/ARAC
PIAL/CAGE2
PIAL/CARO5
PIAL/CARU
PIAL/FEID
PIAL/JUCO6
PIAL/LUGLH
PIAL/PEGR
PIAL/STCA
PIAL/VASC
PICO/ARCO9
PICO/ARNE
PICO/CAPE6
PICO/FEID
PICO/PUTR2
PIEN/ARCO9
PIEN/HYRE70
PIEN/JUCO6
PIEN/RIMO2

REGIONAL FOREST CLASS 2,1; n = 28

ABAM/OPHO
ABGR/TABR2
ABGR/POPU3
ABGR/SETR
ABLA/CACA4
ABLA/GATR3
ABLA/MEFE
ABLA/OPHO
ABLA/STAM2
ABLA/TRCA
PICEA/CADI6
PICEA/COSE16
PICEA/EQAR
PICEA/GATR3
PICO/CAREX WETLAND
PICO-(POTR5)/VAUL
PIEN/CLUN2
PIEN/COSE16
PIEN/EQAR
PIEN/GATR3
POTR5/COSE16
POTR15/COSE16
POTR5/CACA4
THPL/ATFI
THPL/OPHO
TSHE/LIBO3
TSHE/OPHO
TSME/STAM2

REGIONAL FOREST CLASS 2,2; n = 80

ABAM/ACCI
ABAM/ACTR
ABAM/CLUN2
ABAM/GASH
ABAM/VAAL
ABCO-PIPO/CAPE6
ABCO/CACH6
ABGR-PIEN/MAST4
ABGR/TABR2
ABGR/ACCI
ABGR/ACTR
PICO/ARUV
PICO/ELGL
PICO/PUTR2
PIEN/CLUN2
PIEN/GATR3
PIEN/LIBO3
PICEA/MAST4
POTR5/AMAL2-SYOR2/BRCA5
POTR5/AMAL2-SYOR2/CARU
POTR5/AMAL2-SYOR2/TALL FORB
POTR5/AMAL2-SYOR2/THFE

ABGR/ASCA2
ABGR/MANEN
ABGR/CACH6
ABGR/CLUN2
ABGR/COOC
ABGR/LIBO3
ABGR/PAMY
ABGR/SYAL
ABGR/TRCA3
ABGR/VACE
ABGR/VAGL
ABGR/VAME/CLUN2
ABLA/ACGL
ABLA/ACRU2
ABLA/ALVIS
ABLA/CLUN2
ABLA/COCA13
ABLA/GATR3
ABLA/LIBO3
ABLA/OSCH
ABLA/RIMO2
ABLA/RHAL2
ABLA/THOC
ABLA/TRCA
ABLA/VACE
ABLA/VAGL
PICEA/CLUN2
PICEA/LIBO3
PICEA/GATR3

POTR5/CAREX
POTR5/RUPA
POTR5/SYAL/ELGL
POTR5/SYOR2/BRCA5
POTR5/SYOR2/CARO5
POTR5/SYOR2/CARU
POTR5/SYOR2/TALL FORB
POTR5/SYOR2/THFE
PSME/OSCH
PSME/SYAL
PSME/VACE
THPL/ACTR
THPL/ARNU2
THPL/ASCA2
THPL/ATFI
THPL/CLUN2
THPL/GYDR
THPL/LIBO3
THPL/TABR2/ASCA2
THPL/VAME
TSHE/ACTR
TSHE/ARNU2
TSHE/MANEN
TSHE/CLUN2
TSHE/GYDR
TSHE/RHMA3
TSHE/RUPE
TSHE/XETE
TSME/CLUN2

REGIONAL FOREST CLASS 2,3; n = 79

ABAM–ABCO/MANEN
ABAM/VAME
ABAM/XETE
ABCO–ABSH/CHUM
ABCO–CADE27–PIPO/AMAL2
ABCO–PICO/CAPE6–STOC2
ABCO–PILA–PIPO/ARPA6
ABCO–PIPO/MARE11
ABCO–PIPO/RIVI3
ABCO–PIPO/SYPH
ABCO/ACGL
ABCO/AMAL2–COCO6
ABCO/AMAL2/ANDE3
ABCO/CACH6
ABCO/CEVE
ABCO/MANEN
ABCO/RUNI2
ABCO/SYAL

ABLA/PHMA5
ABLA/RIMO2
ABLA/RULA2
ABLA/SPBE2
ABLA/SYAL
ABLA/VACE
ABLA/VAGL
ABLA/VAME
ABLA/XETE
ABSH–TSME/ARNE
ABSH/CACH6
ABSH/CAPE6
ABSH/PENSTEMON
PICEA/VACE
PICO/CAPE6
PICO/CARU
PICO/JUCO6
PICO/SPBE2

ABCO/SYMO
ABCO/VAME
ABGR/ACGL
ABGR/CARU
ABGR/COOC2
ABGR/LIBO32
ABGR/VACE
ABGR/VAGL
ABGR/VAME
ABGR/XETE
ABLA/ACGL
ABLA/ACRU2
ABLA/ARCO9
ABLA/CAGE2
ABLA/CARO5
ABLA/CARU
ABLA/CLUN2
ABLA/COOC
ABLA/LIBO3
ABLA/MARE11
ABLA/OSCH
ABLA/PERA4

PICO/VACE
PICO/VAGL
PICO/VASC
PIEN/VACE
PIJE/ARTRV
PIJE/PUTR2
PIWA/ARNE
PIWA/SYLO/PSJA
POTR5/ARTR2
POTR5/SYAL/ELGL
PSME/ARUV
PSME/LIBO3
PSME/OSCH
PSME/VACCI
PSME/VACE
PSME/VAGL
TSHE/ARNE
TSHE/VAME/LIBO3
TSHE/XETE
TSME/RULA2
TSME/XETE

REGIONAL FOREST CLASS 2,4; n = 30

ABGR/ARNE
ABGR/CAGE2
ABLA/ARCO9
ABLA/CAGE2
ABLA/CARO5
ABLA/CARU
ABLA/SYAL
ABLA//CLCOC2
PICEA/SEST3
PICEA/VACE
PICO/ARTR2/FEID
PICO/ARTR2/STOC2
PICO/CAGE2
PICO/CARO5
PICO/CEVE

PICO/FEID
PICO/PUTR2-RICE
PICO/PUTR2/CAPE6
PICO/PUTR2/STOC2
PICO/STOC2
POTR5/SASC
PSME/ARCO9
PSME/ARNE
PSME/ARUV
PSME/ARUV-PUTR2
PSME/CAGE2
PSME/CARU
PSME/HODI
PSME/SPBE2
PSME/VACE

REGIONAL FOREST CLASS 3,1; n = 25

ALIN2
ALIN2–BEOC2/(SALIX)
ALIN2–POTR15/(SALIX)/CAREX
ALIN2–POTR5/COSE16
ALIN2/CAREX
ALIN2/COSE16
ALIN2/MESIC FORB
ALIN2/MESIC GRAMINOID
ALIN2/SYAL
ALRH2–ABGR
JUSC/COSE16
PICEA/LYAM3
PIEN/COSE16
PIPO–PSME
PIPO/COSE16
POAN3/COSE16
POTR15/COSE16
POTR5/COSE16
POTR5/SYAL
POTR5/SYAL/ELGL
PSME/COSE16
SABO2–SAGE2
SABO2/CARO6
SAGE2–SALE
SAGE2–SARI2

REGIONAL FOREST CLASS 3,2; n = 55

ABCO–CADE27–PIPO/AMAL2
ABCO/MANEN
ABGR/ASCA2
ABGR/CARU
ABGR/CLUN2
ABGR/LIBO3
ABGR/PAMY
ABGR/PHMA5
ABGR/SPBE2
ABGR/TABR2
ABLA/ACGL
ABLA/SPBE2
JUOC/ARAR8/FEID
JUOC/ARTRV
JUOS/PSSP6
PICEA/VACE
PIEN/PHMA5
PIMO/ARTR2
PIMO/CELE3
PIPO–QUKE SERIES
PIPO/AMAL2–MARE11
PIPO/ARPA6
POAN3/ACGR3
POTR15/SAEX
POTR5/AMAL2–SYOR2/CARU
POTR5/AMAL2–SYOR2/TALL FORB
POTR5/AMAL2–SYOR2/THFE
POTR5/AMAL2/TALL FORB
POTR5/AMAL2/THFE
POTR5/CAREX
POTR5/OSOC
POTR5/SASC
POTR5/SHCA
POTR5/SYOR2/CARU
POTR5/SYOR2/TALL FORB
POTR5/SYOR2/THFE
POTR5/TALL FORB
POTR5/THFE
POTR5/WYAM
PSME/ACGL
PSME/ARCO9
PSME/LIBO3
PSME/OSCH
PSME/PHMA5
PSME/SPBE2
PSME/SYAL
PSME/SYOR2
PSME/VACE
PSME/VAGL
QUKE
THPL/ADPE
THPL/ASCA2
THPL/CLUN2
TSHE/ASCA2
TSHE/CLUN2

REGIONAL FOREST CLASS 3,3; n = 83

ABCO–CADE27–PIPO/AMAL2
ABCO–PILA–PIPO/ARPA6
ABCO–PIPO/ARPA6–MANEN
ABCO–PIPO/CEVE
ABCO–PIPO/PUTR2
ABCO–PSME/MAPI3
ABCO/CACH6
ABCO/CEVE
ABCO/CHUM
ABCO/MARE11
ABCO/SYAL
ABGR/ACCI
ABGR/ACGL
ABGR/CAGE2
ABGR/CARU
ABGR/CLUN2
ABGR/MANEN
ABGR/PHMA5
ABGR/SPBE2
ABGR/SYAL
ABGR/TRLA6
ABGR/VACE
ABLA/CLCOC2
ABLA/CLUN2
ACGR3/CARU
CADE27–PSME/CACH6
CUBA
JUOS/ARTR2
PICEA/PHMA5
PICEA/SEST3
PICEA/VACE
PICO/CARU
PICO/FEID
PICO/PUTR2/FEID
PIEN/JUCO6
PIEN/PHMA5
PIFL2/JUCO6
PIFL2/PEFL15/DIST3
PIJE–QUKE/POSE
PIJE–QUKE/RHTR
PILA–PSME/CACH6
PIPO–PIJE/FRRU
PIPO–PIJE/MARE11
PIPO–PSME/PHMA5
PIPO–PSME/PUTR2
PIPO/CAGE2
PIPO/CARU
PIPO/ELGL
PIPO/PHMA5
PIPO/SYAL
PIPO/SYOR2
POTR5/AMAL2/TALL FORB
POTR5/AMAL2/THFE
POTR5/BRCA5
POTR5/CARU
POTR5/JUCO6/CAGE2
POTR5/JUCO6/LUAR3
POTR5/SHCA
POTR5/SYOR2/CARU
POTR5/SYOR2/THFE
POTR5/WYAM
PSME/ACGL
PSME/ARCO9
PSME/ARUV
PSME/CAGE2
PSME/CARU
PSME/CELE3
PSME/FEKI2
PSME/HODI
PSME/JUCO6
PSME/LIBO3
PSME/MARE11
PSME/PHMA5
PSME/PHMA5–LIBO3
PSME/PSSP6
PSME/SPBE2
PSME/SYAL
PSME/SYMO
PSME/SYOR2
PSME/VACE
PSME/VAGL
PSME/VASC
THPL/CLUN2

REGIONAL FOREST CLASS 3,4, n = 44

ABCO–CADE27–PIPO/AMAL2
ABCO/ARPA6
ABCO/CEVE
ABGR/HODI
ABLA/JUCO6
ABLA/MARE11
JUOS/PUTR2–SYOR2/PSSP6
PIFL2/CELE3
PIFL2/FEID
PIFL2/FEKI2
PIFL2/PSSP6
PIFL2/PUTR2
PIPO–PIJE–CADE27
PIPO–PIJE/PUTR2
PIPO–PIJE/STCOL
PIPO–PSME/ARPA6
PIPO–PSME/PEFR3
PIPO–PSME/PSSP6
PIPO–PSME/PUTR2
PIPO–PSME/PUTR2
PIPO/ARPA6
PIPO/ARPA6–PUTR2
PIPO/ASDE6
PIPO/CELE3–PUTR2
PIPO/CEVE–PUTR2
PIPO/FEID
PIPO/PSSP6
PIPO/PUTR2/CAPE6
PIPO/PUTR2/ORHY
PIPO/SYAL
POTR5/STCO4
POTR5/TALL FORB
POTR5/WYAM
PSME/ARCO9
PSME/CAGE2
PSME/CARU
PSME/CELE3
PSME/FEID
PSME/FEKI2
PSME/FEOC
PSME/FESC
PSME/JUCO6
PSME/PSSP6
PSME/SYOR2

REGIONAL FOREST CLASS 4,1; n = 36

ABGR/CLUN2
ABLA/CLUN2
ACNE2/COSE16
ACNE2/EQAR
ALRH2
ALRH2/AMAL2
ALRH2/BEOC2
ALRH2/CELAR
ALRH2/PHLE4
ALRH2/SACE3
BEOC2–POTR15/SALIX
BEOC2/COSE16
BEOC2/CRDO2
BEOC2/MESIC FORB
CRDO2/ROWO
CRDO2/SYAL
JUSC/COSE16
PIPO–POTR5/CAREX–(POA)
PIPO/COSE16
PIPO/CRDO2
PIPO/PRVI
POAN3/ACGR3
POAN3/BEOC2
POAN3/COSE16
POFR2/SAGE2
POTR15/CIDO
POTR15/COSE16
POTR15/SAEX
POTR5–ALIN2/BEGL–RIBES/CAREX
POTR5/COSE16
SAAM2–SAEX–SALUL
SAAM2–SAFL14–SALUL/CAREX
SALUL
SARI2/RIAU
THPL/CLUN2
TSHE/MANEN

REGIONAL FOREST CLASS 4,2; n = 36

JUOC–PIPO/PUTR2/(PSSP6)–FEID
JUOC/ARTRV
JUOC/CELE3/PSSP6
PIPO–QUGA4
PIPO–QUGA4/BASA3
PIPO–QUGA4/CAGE2
PIPO–QUGA4/CECU
PIPO–QUGA4/PUTR2
PIPO–QUGA4/SYAL
PIPO–QUKE SERIES
PIPO–QUWI SERIES
PIPO/ARPA6–PUTR2
PIPO/ARTR2–PUTR2
PIPO/ARTR2/STIPA
PIPO/ARTRV/PONE2
PIPO/CELE3
PIPO/CEVE–PUTR2
PIPO/FEID
PIPO/FESC
PIPO/PHMA5
PIPO/PSSP6
PIPO/PUTR2
PIPO/PUTR2/CAPE6
PIPO/PUTR2/FEID
PIPO/PUTR2/ORHY
PIPO/PUTR2/PSSP6
PIPO/SYAL
PIPO/SYOR2
PIPO/WYMO
PSME/FEID
PSME/PSSP6
PSME/SYOR2
QUGA4/CECU/FEID
QUGA4/ELGL
QUGA4/SYAL
QUGA4/TODI–SYAL/ELGL

REGIONAL FOREST CLASS 4,3; n = 40

ACGR3/CARU
JUOC–PIPO/ARTR2/PSSP6–(FEID–STIPA)
JUOC/ARAR8/DAUN–POSE
JUOC/ARAR8/FEID
JUOC/ARAR8/PSSP6
JUOC/ARRI2/POSE
JUOC/ARTR2–PUTR2/PSSP6–FEID
JUOC/ARTRV
JUOC/CELE3/PSSP6
JUOC/FEID
JUOC/PSSP6
JUSC/PSSP6
PIAT SERIES
PIFL2/CELE3
PIFL2/FEID
PIFL2/FEKI2
PIFL2/JUCO6
PIFL2/MARE11
PIFL2/PSSP6
PIMO–JUOS/ARTR2
PIPO–PSME/PSSP6
PIPO–QUGA4/PUTR2
PIPO/ARTRV/PONE2
PIPO/CELE3
PIPO/FEID
PIPO/PSSP6
PIPO/PUTR2
PIPO/PUTR2/FEID
PIPO/PUTR2/ORHY
PIPO/PUTR2/PSSP6
PIPO/STCO4
PSME/ARUV
PSME/CELE3
PSME/FEID
PSME/FESC
PSME/JUCO6
PSME/PSSP6
PUTR2/FEID
PUTR2/PSSP6
QUGA4 SERIES

REGIONAL FOREST CLASS 4,4; N = 40

JUOC–PIPO–QUGA4/CECU/FEID
JUOC–PIPO/PUTR2/PSSP6–FEID
JUOC–QUGA4
JUOC/ARAR8/DAUN–POSE
JUOC/ARAR8/FEID
JUOC/ARAR8/PSSP6
JUOC/ARNO4
JUOC/ARRI2/POSE
JUOC/ARTR2/CAFI
JUOC/ARTR2/FEID
JUOC/ARTR2/PSSP6
JUOC/ARTRV
JUOC/CELE3–SYOR2
JUOC/CELE3/CAGE2
JUOC/FEID
JUOC/POSE–STOC2
JUOC/PSSP6
JUOS
JUOS/ARNO4
JUOS/ARNO4/ROCK
JUOS/ARTR2
JUOS/ARTR2/ORHY
JUOS/BARREN
JUOS/LEAM
JUOS/PSSP6
JUOS/PUTR2–SYOR2/PSSP6
JUOS/STCO4
PIMO–JUOS/ARAR8
PIMO–JUOS/ARTRV/PSSP6
PIMO–JUOS/CELE3/PSSP6
PIMO–JUOS/LECI4
PIMO–JUOS/PRVI
PIPO/PSSP6
PIPO/PUTR2/PSSP6
POTR5/ARTR2
POTR5/STCO4
PSME/CELE3
PSME/FEID
PSME/MARE11
QUDO

REGIONAL SHRUB CLASS 1,1; n = 18

ALVIS
BEGL-SALIX
BEGL/CARO6
KAMI/CASC12
KRUMMHOLZ
PHEM/ANLA3
SAAR16/CALE4
SAAR16/POBI6
SACA4/CARO6
SACO2/CASC12
SAPL2/CAAQ
SAPL2/CAAQ-CARO6
SAPL2/CASC12
SARE2/CALE4
SAWO/CAAQ
SAWO/CARO6
SAWO/DECE
SAWO/SWPE-PEGR2

REGIONAL SHRUB CLASS 1,2; n = 6

ALVIS
CAME7-PHEM
PEFL15/DECE
SAWO/CAAQ
SAWO/DECE
SAWO/MESIC FORB

REGIONAL SHRUB CLASS 1,3; n = 9

ARAR8/FEID
ARTR4/FEID
ARTR2/FESC
ARTRV-SYOR2/FEID
ARTRV-SYOR2/PSSP6
CELE3/FEID
DROC
DROC/CARU3
SAAR16/POBI6

REGIONAL SHRUB CLASS 1,4; n = 2

ERDI
LEPU

REGIONAL SHRUB CLASS 2,1; n = 48

ALIN2
ALIN2/COSE16
ALVIS
ARCA13/CANE2-POCU3
ARCA13/FEID
ARCAV2/DECE
BEGL/CARO6
COSE16/HELA4
PEFL15/DECE
PEFL15/FEID
SABE2
SABO2-SAGE2
SABO2-SAGE2/CAAN15
SABO2-SALE
SAEA/CAAQ
SAEA/CARO6
SAGE2-SALE
SAGE2-SARI2
SAGE2/CAAQ
SAGE2/CACA4
SAGE2/CARO6
SAGE2/DECE
SAGE2/MESIC FORB
SAGE2/MESIC GRAMINOID
SAGE2/POPA2
SALA6/BARREN
SALA6/ROWO/GRASS-FORB
SALE

SABO2/CAAQ
SABO2/CACA4
SABO2/CANE2
SABO2/CARO6
SABO2/EQAR
SABO2/MESIC FORB
SABO2/MESIC GRAMINOID
SACA4/CARO6
SADR
SAEA
SALI SERIES
SAPL2
SARI2/RIAU
SAWO/CAAQ
SAWO/CANE2
SAWO/CARO6
SAWO/DECE
SAWO/MESIC FORB
SAWO/POPA2
VAOC/CAAQD

REGIONAL SHRUB CLASS 2,2; n = 52

ACGL
ACGR3/CARU
ALIN2
ALVIS
AMAL2/ARTR2/FEID
ARAR8–CELE3/PSSP6–POSE
ARAR8–PUTR2/FEID–PSSP6
ARAR8/FEID
ARCA13/FEID
ARCA13/PASM
ARCAV2/FEID
ARPA6/CEVE–CEPR
ARTR2/FEID
ARTR2/FESC
ARTR4/FEID
ARTR4/FESC
ARTR4/PSSP6
ARTRT/FEID
ARTRV–SYOR2/FEID
ARTRV–SYOR2/PSSP6
ARTRV/BRCA5
ARTRV/CAGE2
ARTRV/FEID
ARTRV/LECI4
ARTRV/PSSP6
ARTRV/STOC2
ARTRW8–PERA4/FEID
ARTRW8–PUTR2/PSSP6
CELE3–SYOR2
CELE3/CARU
CELE3/FEID
CELE3/PRVI
CELE3/PSSP6
CELE3/PSSP6–FEID
CEVE
CRDO2/ROWO
CRDO2/SYAL
PEFL15/DECE
PEFL15/FEID
PEFL15/FESC
PHMA5–SYAL
PRSU
PUTR2/FEID
PUTR2/FESC
PUTR2/PSSP6
PUTR2/(PSSP6)–FEID
ROWO
SABE2
SAVE4/DISP
SAVE4/LECI4
SAWO/DECE
SYAL–RONU

REGIONAL SHRUB CLASS 2,3; n = 29

ARAR8/FEID
ARAR8/PSSP6
ARPA6 SERIES
ARTR2/FEID
ARTR4/PSSP6
ARTR4/STCO4
ARTRV–CELE3/ELCA11–POSE
ARTRV–SYOR2/BRCA5
ARTRV–SYOR2/FEID
ARTRV–SYOR2/PSSP6
ARTRV/CAGE2
ARTRV/PSSP6
ARTRV/STOC2
ARTRW8/PSSP6
ARTRW8/STTH2
CECU–CEMOG–PRSU
CELE3/ARTR2
CELE3/CAGE2
CELE3/HODU
CELE3/PSSP6
CELE3/PSSP6–FEID
CELE3/SYOR2
HODI
PUTR2/CAPE6–STOC2
PUTR2/ORHY
PUTR2/PSSP6
PUTR2/STCO4
PUTR2/(PSSP6)–FEID
QUVA

REGIONAL SHRUB CLASS 2,4; n = 2

ARARL/FEID
ARART/FEID

REGIONAL SHRUB CLASS 3,1; n = 43

ALIN2
ALIN2-BEOC2/SALIX
ALIN2/COSE16
ALIN2/MESIC FORB
ALIN2/MESIC GRAMINOID
ALIN2/RIHU
ALVIS
ARCA13-ARTRV/POCU3
ARCA13/CANE2-POCU3
ARCA13/FEID
ARCA13/LECI4
ARCA13/MURI
ARCA13/(ELCA11)-PONE3
BEOC2
BEOC2-POTR15/SALIX
BEOC2/COSE16
BEOC2/CRDO2
BEOC2/MESIC FORB
COSE16
COSE16/GATR3
COSE16/HELA4
ROWO
SABE2
SABO2/CAAQ
SABO2/CACA4
SABO2/CANE2
SABO2/CARO6
SABO2/EQAR
SABO2/MAST4
SABO2/MESIC FORB
SABO2/MESIC GRAMINOID
SABO2/POPA2
SADR
SAEX/MESIC GRAMINOID
SAGE2/CACA4
SAGE2/CARO6
SALA6/BARREN
SALA6/ROWO/GRASS-FORB
SALE/LECI4
SALU2/CACA4
SALU2/CARO6
SALUL
SPDO

REGIONAL SHRUB CLASS 3,2; n = 18

ARAR8-PUTR2/PSSP6-FEID
ARCA13/MURI
ARPE6/FEID
ARTR2-PUTR2/ORHY-STCO4
ARTR2/FEID
ARTR2/LECI4
ARTR2/PSSP6
ARTR2/STCO4
ARTRT/FEID
ARTRT/LECI4
ARTRT/PASM
ARTRT/PSSP6
ARTRW8-PUTR2/PSSP6
CELE3/PSSP6
PUTR2/ORHY
PUTR2/PRVI
PUTR2/STCO4
SYOC

REGIONAL SHRUB CLASS 3,3; n = 44

ARAR8/FEID
ARAR8/LEAM
ARAR8/POSE
ARAR8/PSSP6
ARNO4/FEID
ARNO4/PSSP6
ARPE6/FEID
ARRI2/POSE
ARRI2/PSSP6
ARTR2 SERIES
ARTRW8-PUTR2/PSSP6
ARTRW8/LEAM
ARTRW8/POSE
ARTRW8/PSSP6
ARTRW8/STCO4
ARTRW8/STTH2
ARVI4-CECU/FEID-STLE2
CECU SERIES
CECU/PSSP6
CELAR/PSSP6

ARTR2/FEID
ARTR2/PSSP6
ARTR2/STCO4
ARTR4/FEID
ARTR4/PSSP6
ARTRT/FEID
ARTRT/LECI4
ARTRT/PSSP6
ARTRV/LECI4
ARTRV/PSSP6
ARTRV/STOC2
ARTRW8–ATCO
CELE3/PSSP6
CHNA2/LEFL4/PSLA3
DACA3
GLNE3/PSSP6
PSSP6
PUTR2–CHNA2
PUTR2/FEID
PUTR2/ORHY
PUTR2/PSSP6
QUBR
RHGL/PSSP6
STLE2

REGIONAL SHRUB CLASS 3,4; n = 42

ARAR8/POSE
ARAR8/PSSP6
ARNO4
ARNO4/ELEL5
ARNO4/HIJA
ARNO4/LEAM
ARNO4/ORHY
ARNO4/POSE
ARNO4/PSSP6
ARNO4/STCO4
ARRI2/POSE
ARTR2–EPVI
ARTR2/POSE
ARTRW8–ATCO
ARTRW8/POSE
ARTRW8/STCO4
ATCA2
ATCA2–ARTR2
ATCA2–KRLA2
ATCA2/HIJA
ATCA2/ORHY
ATCO/ELEL5
ATCO/HIJA
ATCO/LEAM
ATCO/ORHY
ATCO/PSSP6
ERDO–POSE
ERNI2–POSE
ERSP7–POSE
ERTH4–POSE
GRSP–EPVI
GRSP–PRAN2
GRSP/ARNO4/STSP3
GRSP/ARSP5
GRSP/LYAN
GRSP/ORHY
GRSP/POSE
KRLA2/POSE
PRSU
SADO4/PSSP6
SPAR2–ARFR4–POSE
SPAR2–ORSW

REGIONAL SHRUB CLASS 4,1; n = 15

BEOC2
COSE16
COSE16/HELA4
CRDO2
CRDO2/HELA4
CRDO2/ROWO
CRDO2/SYAL
PEFL15/DECE
SAEX
SAEX/EQAR
SAEX/MESIC FORB
SAEX/MESIC GRAMINOID
SALU2/CACA4
SALU2/CARO6
SALUL

REGIONAL SHRUB CLASS 4,2; n = 15

ARCA13/LECI4
ARCA13/MURI
ARTR2/LECI4
ARTRT/FEID
ARTRT/LECI4
ARTRT/PSSP6
PRVI
SAEX
SAEX–SALUL
SAVE4
SAVE4/CHNA2
SAVE4/DIST3
SAVE4/LECI4
SAVE4/SUNI
SYOC

REGIONAL SHRUB CLASS 4,3; n = 13

ARNO4/ORHY
ARNO4/POSE
ARNO4/PSSP6
ATCO–ARSP5–SAVE4
ATCO/ELEL5
ATCO/LEAM
ATCO/ORHY
ATCO/PSSP6
EROVD
KRLA2/POSE
SAVE4
SAVE4/CHNA2
SAVE4/PASM

REGIONAL SHRUB CLASS 4,4; n = 28

ALOC2
ARAR8/PSSP6
ARAR8/STTH2
ATCA2/SPAI
ATCO (II)
ATCO–ARSP5–SAVE4
ATCO–EPNE
ATCO–KRLA2
ATCO–LYSH
ATCO–SAVE4
ATCO–TEGL
ATCO/ARSP5
ATCO/ARSP5/KRLA2
ATCO/ARSP5/ORHY
ATCO/ELEL5
ATCO/KOAM
ATCO/ORHY
ERMI4–PHOR2
ERSP7–POSE
KRLA2
KRLA2/POSE
PSPOP/ORHY
SAVE4
SAVE4 (DUNE)
SAVE4/ATCO/ARSP5
SAVE4/ELEL5
SAVE4/ORHY
SAVE4/SUNI

REGIONAL HERBLAND CLASS 1,1; n = 12

CABR12
CALA11
CACA4
CANI2
CASC12
CASC12–CALE4
CASI2
CASP5
CAPS2
ELQU2
MECI3
SETR

REGIONAL HERBLAND CLASS 1,2; n = 14

ALPINE RANGELAND
CASC10–GERO2
CASC10–PODI2
CASC12
CAPS2
CASP5
DECE–CALE4
ELGL
FEID
FEID–CASC10
FEID–PODI2
FEOV
JUDR–CAREX
MOIST ALPINE TURF

REGIONAL HERBLAND CLASS 1,3; n = 15

ALPINE GRASSLAND
CABR12
CAPU
CARUD
DAIN
DRY ALPINE TURF
ELGL
FEID
FEID–ERCA8
FEOV
FEVI
GERO2
IVGO–MIOB2
IVGO–ERCA8
JUDR–CAREX

REGIONAL HERBLAND CLASS 1,4; n = 4

CAEL3–LUAR3
CAEL3
CARUD
GERO2

REGIONAL HERBLAND CLASS 2,1; n = 33

AGEX–AGSC5
AGST2
CAAP3
CAAQ
CABR12
CABU6
CACA4
CACU
CALA11
CASI2
DECE
DECE–CALE4
DECE–CAREX
ELPA3
ELQU2
EQFL
FEID–CASC10
GLBO

CALA30
CALE4
CALI7
CAMI7
CANE2
CANI2
CARO6
CASC12
JUBA
JUBA–CARO5
NULUP
POCU3
SCAC
SCCE2–CALI
SETR

REGIONAL HERBLAND CLASS 2,2; n = 20

CAHO5–FEVI
DECE
DECE–CAREX
ELGL
FEID
FEID – CA
FEID–DECE
FEID–ELTR7
FEID–STRI2
FEID–SYAL
FEOV
FEVI
FEVI–FEID
FEVI–LUARL5
MECI3
POCU3
PONE3
POPA2
PSSP6–FEID (PALOUSE)
SETR

REGIONAL HERBLAND CLASS 2,3; n = 17

CAHO5–FEID
FEID–CAFI
FEID–ELTR7
FEID–ERHE2
FEID–HICY
FEID–KOMA
FEID–FEKI2
FEID–PSSP6
PSSP6–FEID (PALOUSE)
RONU/FEID
FEID–STRI2
FEID–SYAL
FESC–FEID
FESC–PSSP6
MESIC FORB
PSSP6–BASA3–POSE
PSSP6–ERHE2

REGIONAL HERBLAND CLASS 2,4; n = 4

FEKI2
FEKI2–CAEL3
FEKI2–PHPU5
FEKI2–POCU3

REGIONAL HERBLAND CLASS 3,1; n = 19

CAAP3
CALA30
CAMI7
CANE2
CAPR5–CAAQ
CARO6
CASI2
DECE
DECE–CAREX
ELPA3
ELQU2
EQFL
GLBO
JUBA
PHAR
PHAU7
POCU3
POPA2
SCAC

REGIONAL HERBLAND CLASS 3,2; n = 7

CADO2
FEID–KOMA
JUBA
LETR5–CAREX
PASM
PONE3
PONE3–PULE–ELEL5

REGIONAL HERBLAND CLASS 3,3; N= 11

CADO2
FEID–PSSP6
FESC–PSSP6
LEFL4
PSSP6
PSSP6–BASA3–POSE
PSSP6–FEID (PALOUSE)
PSSP6–FEID (CANYON)
PSSP6–PASM
PSSP6–POSE
PSSP6–STCO4

REGIONAL HERBLAND CLASS 3,4; n = 20

ARLO3–POSE
(BASE2)–POSE
CAST40–POSE
DAUN–POSE
ERCO12–POSE
ERMI4–PHOR2
ERST4–POSE
LEAM–LUAR3
LOCO4–POSE
POSE CA
PSSP6–ARLO3–SPCR
PSSP6–BASA3–POSE
PSSP6–BOGR2
PSSP6–ERHE2
PSSP6–OPPO–(POSE)
PSSP6–POSE
PSSP6–POSE (LITHOSOL)
STCO4–BOGR2
STCO4–POSE
STTH2

REGIONAL HERBLAND CLASS 4,1; n = 12

ELPA3
ELPA3–JUBA
PHAR
PHAU7
SCAC
SCAM2
SCMA
SCPU3
SCVA
TYLA
TYDO
VERNAL POOLS

REGIONAL HERBLAND CLASS 4,2; n = 9

DECE–CAREX
DISP–(SCNE)
ELPA3–DISP
LECI4
LETR5–POSE
JUBA
PASM
POCU3
SPPE

REGIONAL HERBLAND CLASS 4,3; n = 14

ARLO3–POSE
ARLO3–SPCR
DISP
DISP–(SCNE)
JUBA–DISP
LECI4
LECI4 (BOTTOMLANDS)
LETR5–POSE
NAPU
ORHY SERIES
PONE3–PULE–ELEL5
PSSP6
SPAI–DIST3
SUMO

REGIONAL HERBLAND CLASS 4,4; n = 2

LEAM–ENNU
ORHY SERIES

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APPENDIX 5. Descriptions of the regional level Potential Vegetation classes of the Columbia River Basin. Nomenclature for species names follows Kartesz (1994).

FORESTS

COLD, WET FORESTS (CLASS 1,1)

This class contains the coldest and wettest forests, high subalpine sites where snow loads are extreme and prevailing winds redistribute much of it to reinforce slope aspect contrasts. Owing to strong gradients of decreasing precipitation west to east precipitation redistribution (accumulations on northeast- to east-facing slopes) is a much more important factor in the eastern Columbia River Basin (CRB). A corollory pattern is the decrease in importance of *Tsuga mertensiana* and *Tsuga heterophylla* west to east. The dominant series are *Abies lasiocarpa*, *Picea engelmannii*, *Tsuga mertensiana* and to a much lesser degree *Tsuga heterophylla*. Stands of *Larix lyallii* are associated with cirque-basins. Stand structure tends to be quite open and at highest elevations stands exist as islands surrounded by shrub or herbaceous communities. With the exception of *Pinus contorta* these environments exceed the cold limits and soil saturation tolerance of the common seral tree species. No one undergrowth lifeform is characteristic with graminoids (*Calamagrostis canadensis*, *Carex disperma*) forbs (*Streptopus amplexifolius*, *Caltha leptosepala*, *Equisetum arvense*) and shrubs (*Menziesia ferruginea*, *Rhododendron albiflorum*, *Ledum glandulosum*) functioning as both diagnostic and dominant species. Plant associations named by the above-cited species constitute more than 90% of the area within this class. Of the mountain-containing sections this class is absent from only the hot dry Lahontan Basin and Northwestern Basin & Range sections.

COLD, MOIST FORESTS (CLASS 1,2)

Environments include the highest of the subalpine zone, as cold as Class 1,1 but with less effective precipitation. Snowload may be appreciable as evidenced by the abundance of associations characterized by *Luzula glabrata* var. *hitchcockii* or its ecological analogue *Phyllodoce empetriformis*. The dominant series are *Abies lasiocarpa*, *Picea engelmannii* and *Tsuga mertensiana*. Stands in which *Larix lyallii* is a monospecific dominant or is combined with *A. lasiocarpa* or *Pinus albicaulis* characterize cirque-basins and north- and east-facing headwalls. *P. albicaulis*, *Pinus contorta* and *Larix occidentalis* are tree species that, in addition to those species dominating long-term stable states, are important components of seral stages. Stand structure is generally open with non-interlocking canopies and as little as 30% canopy cover. The undergrowth is both dominated and ecologically characterized by a variety of lifeforms; graminoids (*Luzula glabrata* var. *hitchcockii*), forbs (*Xerophyllum tenax*, *Clintonia uniflora*, *Galium triflorum*), dwarf shrubs (*Phyllodoce empetriformis*, *Vaccinium scoparium*) and larger shrubs (*V. deliciosum, V. globulare*, *V. membranaceum*) to tall shrubs (*Menziesia ferruginea* and *Alnus viridis* ssp. *sinuata*). The most widespread associations are *A. lasiocarpa/V. scoparium* (cold phases thereof) and *A. lasiocarpa-P. albicaulis/V. scoparium* (both c.ts. considered members of drier classes north and west of the Yellowstone country), *A. lasiocarpa/X. tenax*, *A. lasiocarpa/Vaccinium* species and cold phases of *A. lasiocarpa/C. uniflora* (in the Northern Rockies only). This class is not represented in the hot dry Lahontan Basin and Northwestern Basin & Range sections.

COLD, DRY FORESTS (CLASS 1,3)

Highest subalpine forests of relatively exposed positions, often upper slopes to ridgetops, or dry climatic regimes and characterized by structure that tends to be open, ranging to as little as 30% canopy cover. *Abies lasiocarpa*, *Picea engelmannii*, *Pinus contorta*, *Pinus albicaulis* and *A. lasiocarpa-P. albicaulis* are the dominant series with lesser extents of *Tsuga mertensiana*. *P. contorta* and *P. albicaulis* are the dominant seral species. Tall and mid-sized shrubs are notably sparse in this environment; the predominant lifeform across all sections is dwarf or low shrubs, most specifically *Vaccinium scoparium*, but including *V. cespitosum*, *Ribes montigenum*, *Juniperus communis* and the mid-sized *V. membranaceum*. Important or indicator status forbs and graminoids include *Arnica cordifolia*, *Polemonium pulcherrimum*, *Carex geyeri*, *Calamagrostis* *rubescens*, and *Luzula glabrata* var. *hitchcockii*. It is in these drier environments that considerable differentiation is seen among sections as to what associations or ecological species assemblages are represented in this class. The associations with the greatest geographical amplitude and areal extent are *A. lasiocarpa/V. scoparium* and *A. lasiocarpa-P. albicaulis/V. scoparium* (or successional variant *P. contorta/V. scoparium*). In the drier ranges, especially those dominated by calcarous substrates, *A. lasiocarpa/V. scoparium* is supplanted by *A. lasiocarpa/R. montigenum*, */J. communis*, */A. cordifolia*, */C. rubescens* and */C. geyeri* or *P. engelmannii*-dominated types.

COLD, VERY DRY FORESTS (CLASS 1,4)

These coldest, driest (most xeric) of forested environments are generally found on west- to south-facing slopes (often wind-impacted) supporting stands with very open canopy structure. The *Abies lasiocarpa* and *Picea engelmannii* series are at the very extremes of their distribution and *Tsuga mertensiana* is lacking; *Pinus albicaulis* and *Pinus contorta* are the major species of both seral and long-term stable stands. Sites are generally above the cold limits of *Pseudotsuga menziesii* and other seral conifers. Undergrowth dominants and indicator species are virtually restricted to herbs and dwarf shrubs. *A. lasiocarpa/*, *P. engelmannii/* and *P. contorta/Arnica cordifolia* are variations on an extensive type that occurs through the Wind River section ranging north and west to the Beaverhead Mountains section and northward mostly east of Continental Divide. The very driest sites are dominated by *P. albicaulis* and various graminoids, such as *Carex rossii*, *Festuca idahoensis* and *Carex geyeri*; in drier ranges east of Continental Divide it is common, especially on calcareous parent materials, for the *P. engelmannii* series to dominate, with *Juniperus communis*, *Hypnum revolutum* and *Clematis sp.* as indicators. This class is apparently lacking in the warmer ranges of the Lahontan Basin and Northwestern Basin and Range sections.

COOL, WET FORESTS (CLASS 2,1)

This class represents the wettest forest environments of the subalpine zone, exclusive of the upper elevation sites. Whereas the forest class 1,1 largely represents non-riparian situations because the locations are at or above stream order 1 locations or stream gradients are too steep to support riparian fringe, many of the sites associated with this class are riparian; most of the rest are associated with seeps or subirrigated positions (toeslopes) or snowload sites. Across the entire CRB, *Abies lasiocarpa* and *Picea engelmannii* are the dominant series with regional differences recognized by the importance of *Abies amabilis*, *Tsuga heterophylla* and *Thuja plicata* in the Eastern Cascades, but of these three only *T. plicata* is included in this environment in the Okanogan Highlands, Flathead Valley and Northern Rockies sections. Locally *Abies grandis*, *Tsuga mertensiana* and *Populus tremuloides* may dominate stands. Stand structure is often multiple-aged with well separated canopies. Dominant and diagnostic undergrowth composition varies widely, from ferns and fern allies (*Equisetum arvense*, *Athyrium filix-femina*, *Gymnocarpium dryopteris*) to forbs (*Senecio triangularis*, *Streptopus amplexifolius*). Especially common are sites dominated by the tall shrubs *Oplopanax horridum*, *Cornus sericea*, *Menziesia ferruginea*, and *Alnus viridis* ssp. *sinuata*. The only community type extending west to east across the CRB (excluding the southernmost portion) is *P. engelmannii/ E. arvense*. Other types common across several sections are *A. lasiocarpa/S. amplexifolius*, *T. plicata/O. horridum* and */A. filix-femina*, *A. grandis/S. triangularis* and *P. engelmannii/C. sericea*. The Lahontan Basin and Northwestern Basin and Range sections have no cited occurrences of this class.

COOL, MOIST FORESTS (CLASS 2,2)

This class incorporates the highest productivity sites within the subalpine zone, where moisture is usually not limiting (at least in western portion of CRB) and the more moderate nature of this environment is reflected in higher species diversity and closed canopy structure. The greatest number of forest series are represented in this class, including *Abies amabilis* and *Abies concolor*, confined to the Eastern Cascade section; *Abies grandis*, exclusively west of the Continental Divide; *Abies lasiocarpa* and *Picea engelmannii*, both virtually ubiquitous; while *Tsuga mertensiana*, *Tsuga heterophylla*, and *Thuja plicata* are important from the Cascades to the northern portion of the west slopes of the Rocky Mountain Front Range. *Populus tremuloides* (mostly east of Continental Divide) and *Pinus contorta* occur almost exclusively as seral community types. The full range of seral tree species (*Pseudotsuga menziesii*, *Pinus monticola*, *Larix occidentalis*, *Pinus contorta*, and *Pinus albicaulis*) occurs here, at least from the Eastern Cascades east to the west slope of Northern Rockies and south to the northern portion of the Idaho Batholith Section; *Pinus ponderosa* is a notably minor component. A great variety of undergrowth species are both dominant and used as indicators. Among the most notable for denoting plant associations of large acreages in the northcentral portion of the CRB are *Clintonia uniflora*, *Linnaea borealis*, *Asarum caudatum* and *Actaea rubra*; additional important indicators in the Eastern Cascades section are *Achlys triphylla*, *Acer circinatum* and *Mahonia nervosa* var. *nervosa*. In the southern portion of the CRB (Lahontan Basin and Owyhee Uplands sections), *P. tremuloides*-dominated types with *Symphoricarpos sp.* characterize this class with the Owyhee Uplands also supporting *A. grandis* and moist *P. menziesii* types.

COOL, DRY FORESTS (CLASS 2,3)

This class characterizes relatively warm and dry subalpine sites with a distinct break from class 2,2. Moist site indicators, many of them forbs, are largely lacking. Additionally, the number of forest series represented is reduced and the *Pseudotsuga menziesii* series is present, indicating drier sites. The major series are *Abies lasiocarpa*, *A. grandis*, *A. amabilis* (East Cascades only), *Tsuga mertensiana* and *Pinus contorta* (seral only). Major seral tree species are *P. contorta*, *P. menziesii*, *Larix occidentalis*, *P. albicaulis*; *P. ponderosa* may be a seral component on the warmest of these sites. Stand structure is generally closed with overlapping canopies. Some of the more broadly distributed plant associations are *A. lasiocarpa/Vaccinium globulare* or *V. membranaceum*, */Xerophyllum tenax*, */V. cespitosum*, */Calamagrostis rubescens*, *P. menziesii/Linnaea borealis*, */V. cespitosum*, */V. globulare*, and *Abies grandis/X. tenax* (or *V. membranaceum*). The Lahontan Basin section manifests its distinctive environment by contributing *Populus tremuloides/Artemisia tridentata* to this class.

COOL, VERY DRY FORESTS (CLASS 2,4)

This driest-warmest of subalpine environments is represented in only seven sections with no discernable pattern to the distribution. Both the wettest sections (East Cascades and Okanogan Highlands) and driest (the Beaverhead Mountains and Wind River sections), support examples of this class. These sites are basically the driest capable of supporting the *Abies lasiocarpa* or *Picea engelmannii* series and the coldest supporting the *Pseudotsuga menziesii* series (though *P. menziesii* is generally not considered a subalpine zone climax dominant). *Pinus contorta* is apparently a long-persisting dominant in the East Cascades (on the extensive Mazama ash soils) and Wind River sections and is also a common seral species throughout the rest of this class's representation in the CRB. *Pinus albicaulis* and *P. menziesii* are also common subalpine woodland dominants, but sites are beyond the cold limits of *Pinus ponderosa*. Stands are mostly open but some associations, e.g. *A. lasiocarpa/Arnica cordifolia*, tend to be predominantly closed. Common and diagnostic undergrowth species include *A. cordifolia*, *Calamagrostis rubescens*, *Carex geyeri*, *Spiraea betulifolia*, *Arctostaphylos uva-ursi*, *Symphoricarpos albus* or *S. oreophilus*. On calcareous substrates *Senecio streptanthifolius* and *Clematis tenuiloba* or *C. pseudoalpina* are important. Associations with the greatest area are perhaps *P. menziesii/S. betulifolia* and *A. lasiocarpa/A. cordifolia*.

WARM, WET FORESTS (CLASS 3,1)

This class contains the mid-montane riparian forests, typically with tall shrub-dominated understories. *Populus trichocarpa* occurs throughout the CRB in this class. It is joined or replaced by *Populus angustifolia*, *Populus tremuloides*, *Alnus rhombifolia* or *Alnus incana*, *Salix boothii* or *Salix geyeriana* within the Basin. In the southern regions, *A. incana* is the major riparian tree species. *Pseudotsuga menziesii* is the most common conifer in this riparian forest and usually appears with the hardwoods listed above. *Cornus sericea* and *Crataegus douglasii* form tall shrub thickets under the tree canopy. *Picea engelmannii* or *Pinus contorta* also appear in this environment. Understories are characterized by sedges (*Carex aquatilis, C. lanuginosa, C. lasiocarpa, C. eurycarpa*), moist grasses and forbs.

WARM, MOIST FORESTS (CLASS 3,2)

Forests occurring here are mid-montane on mild, moist sites. Associations in this class have the highest productivity in this temperature regime. In the northern regions, forests that reflect a maritime climatic influence occupy this class, for example most associations in *Abies grandis* and *Thuja plicata* series. As the maritime influence diminishes southward, the *Pseudotsuga menziesii/Acer glabrum* and *Pseudotsuga menziesii/Linnaea borealis* associations become the representative types for the class. Most *Populus tremuloides* associations within this temperature regime appear in this class. *Abies concolor* and *Calocedrus decurrens* associations occupy this class in the Southern Cascades section. This environment is represented in all sections except the High Lava Plains, Lahontan Basin, Yellowstone Highlands, and Wind River sections.

WARM, DRY FORESTS (CLASS 3,3)

These are mid-montane forests occurring in warm, moist conditions. The *Pseudotsuga menziesii/Physocarpus malvaceus* association typifies this class throughout the Rocky Mountains. *Abies grandis/P. malvaceus*, *Pinus ponderosa/P. malvaceus*, *P. menziesii/Calamagrostis rubescens* and *Abies grandis/C. rubescens* associations also represent this class. *Abies concolor* associations with *Ceanothus velutinus* and *Arctostaphylos patula* understories represent this class in the southern part of the Eastern Cascades section. Forests in the Southern Cascades section are represented by *Pinus ponderosa-Pinus jeffreyi/Mahonia repens*, *A. concolor-Pinus monticola-P. ponderosa*, and *P. jeffreyi-Quercus kelloggii* associations. This is a major environment across the area, absent only in the non-forested High Lava Plains and Lahontan Basin sections.

WARM, VERY DRY FORESTS (CLASS 3,4)

Warm, very dry conditions within the entire CRB are the typical features of this class. The forests are mid-montane. This class represents cooler environments where *Pinus ponderosa* is a minor part of the forests and where *Pseudotsuga menziesii* is found at lower treeline (see class 4,3). Bunchgrasses, *Juniperus communis* or *Cercocarpus ledifolius* form associations with *P. menziesii* in the eastern sections of the CRB. *Pinus flexilis* is part of these open forests in the Beaverhead Mountains, Challis Volcanics, Overthrust Mountains, and Belt Mountains sections. In mild climatic regions, this class is transitional to lower treeline forests dominated by *P. ponderosa*. *P. ponderosa* and *Pinus jeffreyi* with *Ceanothus velutinus* represent this class in the Southern Cascades section. This environment is expressed in all sections except the High Lava Plains, Blue Mountains, Northern Rockies, Bitterroot Valley, Idaho Batholith, Yellowstone Highlands, Owyhee Uplands, Northwestern Basin and Range, and Lahontan Basin sections.

HOT, WET FORESTS (CLASS 4,1)

Lower montane riparian forests in hot environments represent this class. *Betula occidentalis*, *Populus fremontii*, *Alnus rhombifolia* and *Salix amygdaloides* are common hardwoods in this environment. *Pinus ponderosa* and *Pseudotsuga menziesii* may occur in these forests with tall shrubs. In the Southern Cascades section, *Tsuga heterophylla* and *Alnus rubra* riparian forests occur.

HOT, MOIST FORESTS (CLASS 4,2)

Only the Eastern and Southern Cascades, Okanogan Highlands, High Lava Plains, and the Owyhee Uplands sections are represented by this class. These warm, moist montane forests or woodlands are found at lower treeline in the northern Cascades. *Pinus ponderosa*, *Quercus garryana*, and *Pinus jeffreyi* with *Purshia tridentata* typify this class. In the Owyhee Uplands, *Pseudotsuga menziesii* and *Pinus ponderosa* with bunchgrasses or *Symphoricarpos albus* and *S. oreophilus* occupy this class. *Juniperus occidentalis-P. ponderosa* with *P. tridentata* or *Artemisia tridentata* fill this class in the High Lava Plains. This is almost always a lower treeline environment. *J. occidentalis* woodlands usually appear when treeline exists below this environment.

HOT, DRY FORESTS (CLASS 4,3)

These hot, dry environments are found at lower treeline, and typically support open canopy forests or woodlands. The conifers *Pseudotsuga menziesii*, *Pinus flexilis*, *Pinus ponderosa*, and *Juniperus scopulorum* are found, with bunchgrasses or *Purshia tridentata* in the understories. These typically occur in warmer environments at lower elevations than class 3,3. Similar associations which are found in class 3,4 are responding along a moisture gradient transitional to class 4,3 rather than a temperature gradient. These open forests with bunchgrasses are found primarily in the Rocky Mountains south of the maritime climatic influence. The Southern Cascade section is typified by *J. occidentalis* and dry *P. ponderosa/P. tridentata* woodlands. *Acer grandidentatum* associations appear in the eastern portion of the Northwestern Basin and Range section. This class is found in all sections except the Lahontan Basin, Modoc Plateau, Owyhee Uplands, Wind River, Overthrust Mountains, Beaverhead Mountains, Challis Volcanics, Bitterroot Mountains, Northern Rockies, Flathead Valley, and Okanogan Highlands.

HOT, VERY DRY FORESTS (CLASS 4,4)

These are the driest and hottest environments supporting trees in the CRB. These woodlands are found only in the southern regions of the CRB. *Juniperus occidentalis* or *J. osteosperma* woodlands typify these environments. The *Pseudotsuga menziesii/Cercocarpus ledifolius* association appears with *Juniperus osteosperma* in the Owyhee Uplands. *Artemisia tridentata*, *A. arbuscula*, *A. nova*, and *A. rigida* are common understory associates. *Quercus douglasii* woodlands, as well as *Q. garryana* mixed with *J. occidentalis* and *Pinus ponderosa*, are found in the Southern Cascades and Modoc Plateau sections.

SHRUBLANDS

COLD, WET SHRUBLANDS (CLASS 1,1)

Alpine and high-subalpine wetland communities are included in this class, many extending to relatively low elevations in the subalpine zone in frost pockets. The *Salix wolfii*, *S. planifolia*, and *Kalmia microphylla* series best characterize this bioenvironment, each represented by many associations found throughout the assessment area. Other associations include those in the *Salix commutata* series, as well as the highest elevation *Vaccinium occidentale* and *Betula glandulosa* associations.

COLD, MOIST SHRUBLANDS (CLASS 1,2)

Two types of vegetation, low willows (*Salix arctica* and *S. nivalis*) and heathers (*Cassiope mertensiana* and *Phyllodoce empetriformis*), define this class. Species codominant with the low willows include *Potentilla diversifolia* and *Caltha leptosepala*. *Antennaria lanata* and *Potentilla diversifolia* are codominant with *Phyllodoce empetriformis*. This bioenvironment largely represents snowbed communities of sections occurring in the northern Rocky Mountains and Okanogan Highlands.

COLD, DRY SHRUBLANDS (CLASS 1,3)

The bioenvironment represented by this class occurs only in the eastern half of the assessment area, in sections that have carbonate geologic substrates. While the dry, *Salix nivalis* type occurs in this class, it is largely characterized by the *Dryas octopetala* series, with the *D.octopetala* and *D. octopetala-Carex rupestris* associations.

COLD, VERY DRY SHRUBLANDS (CLASS 1,4)

This class only occurs in the alpine zone of the Warner Mountains of the Modoc Plateau Section. The extremely dry types represented here include *Ericameria discoidea* and *Leptodactylon pungens*.

COOL, WET SHRUBLANDS (CLASS 2,1)

This class represents the cool, montane, riparian and wetlands habitats, found in primarily in the northern portions of the CRB, but also in the isolated mountain ranges in the northern Great Basin. These are widely distributed but usually found in narrow corridors along montane rivers and streams, or in patches in some of the higher valleys, generally within a coniferous forested landscape. They are highly productive, with deep alluvial soils. The class is largely characterized by tall *Salix* and *Alnus incana* habitats, the most important of which are *S. boothii*, *S. geyeriana*, *S. lemmonii*, *S. drummondiana*, and *S. wolfii* riparian shrublands with *Carex* species, *Deschampsia cespitosa*, and moist forbs dominating the understory or patches between the large shrubs. It also includes minor parts of four other series: *Alnus viridis* ssp. *sinuata* slopes, mountain *Artemisia cana* flats with *D. cespitosa* or *Poa cusickii* understories, and cold, peat-forming wetland shrublands with *Betula glandulosa* or *Vaccinium uliginosum* communities.

COOL, MOIST SHRUBLANDS (CLASS 2,2)

Relatively moist shrublands and montane steppe types define this class. The vegetation is characterized by *Cercocarpus ledifolius* stands, *Artemisia tridentata* ssp. *vaseyana* steppe, cool *Purshia tridentata* habitats, montane *Artemisia cana* playas, and high elevation *Artemisia arbuscula* communities. It also includes shrub types dominated by *Prunus subcordata*, non-riparian *Crataegus douglasii*, *Ceanothus velutinus*, *Arctostaphylos patula*, *Pentaphylloides floribunda*, *Symphoricarpos sp.*, and *Peraphyllum ramosissimum*. This productive and fairly resilient class can be found as an important type in all areas in the CRB, on all aspects, slopes and soil types. At low elevations, generally these are on north slopes and deep soils, while at higher elevations they are widely distributed on various aspects and soils. *Festuca idahoensis* dominates the understory of most of the types, although *Festuca scabrella*, *Carex geyeri*, *Leymus cinereus*, and *Bromus vulgaris* can be locally important.

COOL, DRY SHRUBLANDS (CLASS 2,3)

This is a minor, but extremely diverse class. It contains the cool, drier shrublands which are: the dry *Purshia tridentata* communities; both *Cercocarpus montanus* var. *glaber* and *C. ledifolius* stands; cool, *Artemisia tripartita* steppe; dry *Artemisia tridentata* ssp. *vaseyana* steppe; cool, *Artemisia arbuscula* flats; and chaparral communities dominated by *Quercus vaccinifolia*, *Arctostaphylos patula*, *Holodiscus discolor* and *Prunus subcordata*. They are widely distributed in the CRB, although are much more common in the southern sections. The understory is usually characterized by *Pseudoroegneria spicata*, but *Stipa comata*, *Oryzopsis hymenoides*, *Festuca idahoensis*, *S. columbiana*, *S. occidentalis* and *S. lemmonii* can be important.

COOL, VERY DRY SHRUBLANDS (CLASS 2,4)

This is very minor, cool, dry sagebrush steppe class. It includes only two associations. One is the *Artemisia arbuscula* ssp. *thermopola/ Festuca idahoensis* plant association from the Yellowstone Highlands, Beaverhead Mountains and Challis Volcanics sections in the east central portion of the CRB. The second is the *Artemisia arbuscula* ssp. *longiloba/Festuca idahoensis* association from the southeastern sections, in eastern Idaho and adjacent Utah.

WARM, WET SHRUBLANDS (CLASS 3,1)

This class ranges from warm, wet shrublands to mid-montane riparian habitats. It occurs on flats in valley bottoms and canyons with deep soils throughout the CRB. As with most riparian and wetland communities, these are found as fairly small, linear patches in the overall landscape. They are characterized by *Alnus incana*, *Cornus sericea* and some *Salix* riparian community types. The willow types include most *S. rigida* and *S. lucida* ssp. *lasiandra* associations, as well as the lower elevation, warmer *S. boothii*, *S. lemmonii*, and *S. drummondiana* associations. The understory of these riparian types are characterized by moist forbs, sedges and grasses such as *Aconitum columbianum*, *Urtica dioica*, *Carex nebrascensis*, *Carex rostrata*, *Deschampsia cespitosa* and *Equisetum arvense*. Some wetland shrublands with *Pentaphylloides floribunda* and *Spiraea douglasii* are included within this class. Also included are the warmer *Artemisia cana* playas, which have understories dominated by *Poa nevadensis*.

WARM, MOIST SHRUBLANDS (CLASS 3,2)

The warm, productive steppe shrublands, generally found on deep soils, define this group of habitats. The class contains a diverse group of associations. They occur on deep loess, alluvial or sandy soils, generally on gentle slopes and flats. In the Palouse Prairie section the class includes the moist, low shrublands dominated by *Symphoricarpos albus*, *Rosa nutkana* and *Festuca idahoensis*. A minor but locally important type from this class is the *Artemisia tripartita* steppe, with *F. idahoensis*, *Stipa comata*, *Leymus cinereus* or *Oryzopsis hymenoides* understories. Also included here are *A. tridentata* ssp. *wyomingensis-Purshia tridentata* and warm *P. tridentata* communities, with an *O. hymenoides*, *S. comata*, *S. columbiana*, *Pseudoroegneria spicata* or rarely a *F. idahoensis* understory. Finally, the class includes the cooler examples of *A. tridentata* ssp. *tridentata* steppe, those with *S. columbiana*, *F. idahoensis*, *Pascopyrum smithii* or *P. spicata* understories.

WARM, DRY SHRUBLANDS (CLASS 3,3)

The warmer, drier and more typical sagebrush steppe types are included within this class. It is one of the most important classes, widely distributed on all slopes, aspects and soil types, although it generally only dominates the landscape in the southern sections of the CRB. It includes the most productive *Artemisia nova* and *A. rigida* flats (not all that productive). These occur on basalt with widely spaced shrubs and *Pseudoroegneria spicata* or *Festuca idahoensis* in the understory. The class has the drier *Artemisia tridentata* ssp. *wyomingensis* steppe, generally found on rocky- or sandy-soiled slopes with *P. spicata*, *Stipa thurberiana* or *S. comata* as the understory dominants. Also present are the driest *Cercocarpus ledifolius* and *Purshia tridentata* communities, usually found at higher elevations on steep, rocky slopes with *P. spicata* in the understory. Also included are some low elevation, tall shrub types including *Glossopetalon nevadense*, *Celtis laevigata* var. *reticulata* (sometimes considered a tree), and *Rhus glabra*. The understory of these is dominated by warmer grasses, primarily *P. spicata*. Finally, the class also contains some warm chapparal assocations, characterized by *Ceanothus cuneatus*, *Arctostaphylos viscida* and *Quercus breweri*. These chapparals are often closed shrublands, but sometimes have *Stipa columbiana*, *S. lemmonii*, *Festuca idahoensis*, *Danthonia californica* or *P. spicata* as important associates.

WARM, VERY DRY SHRUBLANDS (CLASS 3,4)

This class includes the hottest, driest sagebrush steppe vegetion in the CRB, along with the cooler, salt desert shrub types. The sagebrush steppe parts of the class include scablands and shallow soiled flats, with widely spaced low shrubs and up to 60% cover of exposed basalt or rhyolite. Dominant shrubs include *Artemisia rigida*, *A. arbuscula*, *A. nova*, *A. frigida* and *A. tridentata* ssp. *wyomingensis*. Also included here are the *Erigonum*-dominated scablands, with *E. douglasii*, *E. niveum*, *E. sphaerocephalum*, and *E. thymoides* associations. The grasses here are characterized by *Poa secunda* or *Elymus elymoides*, athough *Stipa comata* and *Pseudoroegneria spicata* can be locally important. The salt desert shrub types in this class occur on flats to steep slopes of all aspects, but generally are found only in the southern portions of the CRB, in Nevada, southeastern Oregon and southwestern Idaho. These are mid-sized to low shrubs, also widely spaced, usually on flat to gentle alkaline or barren ash slopes, but occasionally on steep rimrock or talus cliffs. *Atriplex canescens* and *Grayia spinosa* are the most important series, but the class includes *Ephedra sp.*, *Sphaeromeria argentea* and *Salvia dorii* associations as well. The understory is generally characterized by bare ground, but *P. spicata*, *E. elymoides*, *P. secunda*, *Oryzopsis swalennii* provide much of the biomass and productivity.

HOT, WET SHRUBLANDS (CLASS 4,1)

These are the warm, wet riparian and bottomland habitats, invariably flat and deep-soiled. They occur along valley bottom and streams, and are characterized by tall shrubs which occasionally form an almost closed canopy. They generally occur as narrow corridors, forming conspicuous stands only in the larger valleys. The most important species is *Salix exigua*, which dominates most of the plant communities from this class. *Carices*, *Juncus sp.*, *Equisetum sp.*, *Rosa woodsii*, mesic forbs (*Heracleum lanatum* and *Hydrophyllum sp.*), and grasses (primarily *Leymus cinereus* but also including *Elymus caninus* and *Poa nevadensis*) are the common understory dominants. In the Palouse Prairie section and valleys of the Blue Mountains section, *Crataegus douglasii* dominates riparian vegetation with or instead of, *S. exigua*. *Cornus sericea*, *Betula occidentalis*, and *Philadelphis lewisii* are locally important, especially in the northern and eastern sections of the CRB.

HOT, MOIST SHRUBLANDS (CLASS 4,2)

The class includes the hot, moist, basin shrublands. All are found on flat or gentle slopes, and none have shallow soils. These occur on closed-basin lake margins and valley bottoms, on playas which are annually flooded, as well as in desert stream floodplains. They are found largely in the southern sections of the CRB, and include three seperate groups of communities. The most significant are the seasonally flooded, alkaline bottomland habitats. *Sarcobatus vermiculatus* usually is the only shrub dominating these open playas, but sometimes can be codominant with *Atriplex confertifolia*. Either *Distichlis spicata* or *Leymus cinereus* often provide significant cover in the understory. The second group of habitats in this class are the warmest *Artemisia cana* playas with *L. cinereus* or *Muhlenbergia richardsonis* in the understory. The third group includes the deep-soiled, seasonally-flooded valley bottoms usually dominated by *Artemisia tridentata* ssp. *tridentata*, sometimes codominant with *S. vermiculatus*. These can have *L. cinereus*, *Festuca idahoensis*, *Stipa comata*, or *Pseudoroegneria spicata* as the major grasses.

HOT, DRY SHRUBLANDS (CLASS 4,3)

This class is characterized by the modal salt desert shrub communities. They are both hot and dry, but usually have sufficient moisture to allow for the development of some bunchgrass cover. *Sarcobatus vermiculatus*, *Atriplex confertifolia*, *A. canescens* and *Krascheninnikovia lanata* characterize the important habitats. These salt desert shrubs are often codominant with *Artemsia tridentata* ssp. *wyomingensis* or *A. nova* in this class. Associations occur on gentle slopes and flats, and on the margins of the dry playas. The soils are usually deep and alkaline, but associations found on stony or sandy soils do occur. Important grasses of these habitats include *Oryzopsis hymenoides*, *Elymus elymoides*, and *Poa secunda*. This bioenvironment generally occurs on the margins of the basins in the southern sections of the CRB, and is generally less significant than either class 4,2 or 4,4.

HOT, VERY DRY SHRUBLANDS (CLASS 4,4)

The hottest and driest habitats in the CRB define this class. They dominate many of the basins of Nevada, southeastern Oregon, southern Idaho and northwestern Utah. They are characterized by widely spaced, tall shrubs on playas, barrens or low dunes. Salt desert shrubs are the only important species, with *Sarcobatus vermiculatus* and *Atriplex confertifolia* being the most significant. *Grayia spinosa*, *Atriplex nuttalii*, *Psorothamnus polydenius* var. *polydenius*, *Ephedra nevadensis* and *Allenrolfea occidentalis* associations are also included within the class. The sparse understory is often barren, or characterized by isolated plants of *Oryzopsis hymenoides*, *Elymus elymoides*, *Sporobolus airoides*, *Lycium shockleyi*, *Kochia americana*, *Nitrophila occidentalis*, *Suaeda nigra* and desert annuals.

HERBLANDS

COLD, WET HERBLANDS (CLASS 1,1)

Communities occurring on saturated, generally organic substrates define this class. These wetland communities are dominated largely by graminoids, but the class also includes a few forb-dominated types. *Carex scopulorum* is the community that characterizes this class. It occurs throughout the CRB, although it is more common in the central and eastern sections. *Carex nigricans*, and to a lesser extent *C. spectabilis*, are prominent types in the western sections of the CRB. Other graminoid-dominated types in this class include high elevation phases of the *Eleocharis pauciflora*, *Calamagrostis canadensis*, *Carex lasiocarpa*, and *C. simulata* types. Forb-dominated communities, such as *Senecio triangularis* and *Mertensia ciliata*, occur in several sections in the western portion of the CRB.

COLD, MOIST HERBLANDS (CLASS 1,2)

This class is comprised of moist alpine and high-subalpine communities that area also largely dominated by graminoids. These communities are often associated with late-lying snow and substrates are generally not saturated season-long. In some cases they are mesic variants of wetland communities occurring in class 1,1, such as *Carex scopulorum* and *C. spectabilis*, where they are associated with *Potentilla ovina* and *Geum rossii*, indicating dryer substrates. Cold, moist grassland types dominated by *Festuca ovina*, *F. idahoensis*, *Elymus glaucus*, and *Deschampsia cespitosa* also occur in this class, with herbaceous associates such as *Potentilla diversifolia*, *Caltha leptosepala*, and *Trisetum spicatum*. The snow-bed community, *Juncus drummondii-Carex* spp., also occurs here.

COLD, DRY HERBLANDS (CLASS 1,3)

Occurring in this class are dry herbaceous communities on well drained soils. Along the alpine moisture gradient, they occur between the snow-accumulation sites of class 1,2 and the wind-deflation sites of class 1,4. In the northwestern portion of the CRB dry *Danthonia intermedia*, *Kobresia bellardii*, *Carex breweri*, *Festuca viridula*, and *F. ovina* communities occur. In the central and eastern portions of the area the *Festuca idahoensis-Eriogonum caespitosum* and *Geum rossii* types occur in this class. *Calamagrostis purpurascens* occurs in both central and northwestern sections.

COLD, VERY DRY HERBLANDS (CLASS 1,4)

This class consists of dry alpine turfs that occur on exposed ridgelines where little to no snow accumulates in the winter. This combination of cold temperatures and xeric moisture conditions only occurs in mountains of the central and eastern portion of the CRB. Several associations in the *Carex elynoides* and *C. rupestris* series occur in this class.

COOL, WET HERBLANDS (CLASS 2,1)

Similar to class 1,1, this class has saturated substrates that are generally high in organic matter, although considerably more mineral/organic matter variation occurs in this class than its high-elevation neighbor. With few exceptions, graminoid associations dominate these conditions, with *Carices* being most prevalent. There are several widespread associations occurring in sections throughout the CRB, including *Carex rostrata*, *C. aquatilis*, *C. lasiocarpa*, *C. lanuginosa*, *C. simulata*, several wet *Deschampsia cespitosa* types, and *Calamagrostis canadensis*. Associations occurring largely in the Rocky Mountain sections include *Carex limosa*, *Glyceria borealis*, *Eleocharis pauciflora*, *Senecio triangularis*, and *Equisetum fluviatile*. *Poa cusickii* and high-elevation *Juncus balticus* types represent the dry end of this class.

COOL, MOIST HERBLANDS (CLASS 2,2)

This class is largely comprised of moist grasslands occurring at mid-montane to subalpine elevations, with a few forbland associations also occuring. Substrates are generally well-drained, although mesic riparian/wetland habitats are also included here. Examples of the latter situation include the *Poa palustris* association, as well as several xeric *Deschampsia cespitosa* types where *Festuca scabrella*, *F. idahoensis*, and *Carex* spp. are codominants. Moist, cool *F. idahoensis* associations best characterize this class, occurring throughout the CRB. *F. idahoensis* types include *F. idahoensis-Deschampsia cespitosa*, *F. idahoensis-Stipa richardsonii*, and *F. idahoensis-Elymus caninus*. *Festuca viridula* associations are restricted to subalpine elevations in the northwestern sections of the CRB, while *F. scabrella* types occur in the northeastern sections. Other series represented by this class include *Poa nevadensis*, *P. cusickii*, *Carex hoodii*, *Elymus glaucus*, *Festuca ovina*, *Veratrum californicum*, and *Mertensia ciliata*.

COOL, DRY HERBLANDS (CLASS 2,3)

Class 2,3 consists of dry *Festuca* grassland associations, with *F. idahoensis* types from throughout the CRB and *F. scabrella* types occurring in the northeastern sections. Codominants with these species vary somewhat geographically, but include *Koeleria macrantha, Pseudoroegneria spicata, Carex filifolia, Poa secunda, Festuca kingii, Eriogonum heracleoides, Stipa richardsonii,* and *Hieracium cynoglossoides*. Moist *F. idahoensis* associations that occur in the northwestern sections of the CRB are: *F. idahoensis-Carex hoodii, F. idahoensis-Rosa nutkana, F. idahoensis-R. woodsii*, and *F. idahoensis-Symphoricarpos albus*. The only non-fescue type in this class is the *P. spicata-E. heracleoides* association.

COOL, VERY DRY HERBLANDS (CLASS 2,4)

Within the CRB, this class represents a bioenvironment found only in the relatively arid mountain ranges of the Challis Volcanics, Beaverhead Mountains, and Belt Mountains sections. *Festuca kingii* is the only series included in this class, forming near monocultures in the *F. kingii* association, as well as codominating with *Carex elynoides*, *Phlox pulvinata*, and *Poa cusickii* in three additional types. These associations occupy warm, well-drained, unstable, high-subalpine and low-alpine habitats.

WARM, WET HERBLANDS (CLASS 3,1)

Class 3,1 includes a wide variety of warm graminoid wetlands occurring in standing water or on a substrate that is saturated season-long. The class is best characterized by the widespread *Carex nebrascensis* association. Other modal communities in this class include *Eleocharis palustris*, *C. simulata*, *C. aperta*, *C. lanuginosa*, *C. microptera*, *Nuphar lutea* var. *polysepala*, and *Juncus balticus*. Warm, low-elevation variants of the *Glyceria borealis*, *Equisetum fluviatile*, and *Deschampsia cespitosa* types occur here as well as cool, high-elevation variants of *Scirpus acutus*. In the northeastern sections of the CRB, this class includes the *Phalaris arundinacea* association.

WARM, MOIST HERBLANDS (CLASS 3,2)

Bioenvironments represented by this class are not well represented in the CRB. *Poa nevadensis* is the only series represented here, where it occurs throughout the Northwestern Basin and Range section in Nevada and Oregon. Two associations are recognized in this series, *P. nevadensis* and *P. nevadensis-Puccinellia lemmonii-Elymus elymoides*.

WARM, DRY HERBLANDS (CLASS 3,3)

This class includes the moist *Pseudoroegneria spicata* grassland associations. Most occur in steep, canyon or mountainous terrain where *P. spicata* is codominant with *Balsamorhiza sagittata*, *Festuca idahoensis*, and *Poa secunda*, and in some sections *Stipa comata* and *Eriogonum heracleoides*. The class also includes gentle-gradient Palouse grasslands, which are largely extinct, and depositional areas in some eastern sections where *Pascopyrum smithii* is codominant.

WARM, VERY DRY HERBLANDS (CLASS 3,4)

Pseudoroegneria spicata grasslands also characterize this class with associations on the dry end of the gradient. This class is somewhat less uniform than class 3,3, with several other dry grassland series also represented. *P. spicata* types include those where it is codominant with *Poa secunda, Arenaria congesta*, *Sporobolus cryptandrus*, and *Opuntia polyacantha* in canyon grasslands and *Bouteloua gracilis* along the eastern edge of the CRB. *Stipa comata* grasslands are included in this class, as are those dominated by *S. thurberiana* in the Modoc Plateau section. Two special edaphic situations are also encompassed by this class. One is the scablands occurring on volcanic surfaces in the western sections of the CRB, where such associations as *P. secunda*, *Danthonia uniflora-P. secunda*, *Lomatium cous-P. secunda*, and *A. congesta-P. secunda* occur. The second edaphic situation occurs on windswept alluvial fans in the high-mountain valleys of the Beaverhead Mountains and Challis Volcanics sections where the *Carex stenophylla-P. secunda* association occurs.

HOT, WET HERBLANDS (CLASS 4,1)

Hot wetland types occurring at the lowest elevations of the CRB comprise this class. Most are widespread in distribution. The *Typha latifolia* and *Scirpus acutus* types are most characteristic of this bioenvironment. Other *Scirpus* series are also included here, including *S. validus, S. maritimus*, *S. pungens*, and *S. americanus*, and the *Typha domingensis* association found in the Lahontan Basin section. In the northeastern sections of the CRB, this class includes the *Phragmites australis* association.

HOT, MOIST HERBLANDS (CLASS 4,2)

This class encompasses low-elevation, bottomland habitats that are relatively moist. Soils tend to be deep and have high water-holding capacity, but are alkaline since most moisture loss occurs through evaporation from the surface. Several *Distichilis spicata* associations, especially *D. spicata-(Scirpus nevadensis)*, as well as moist *Leymus cinereus* and some low-elevation *Juncus balticus* types, characterize this class. In addition, *Spartina pectinata* and *Pascopyrum smithii* associations occur in the eastern sections, and *Leymus triticoides* in the Modoc Plateau section.

HOT, DRY HERBLANDS (CLASS 4,3)

This class is comprised of a heterogeneous group of grass- and forb-dominated vegetation. The hotter and drier of the *Distichilis spicata* associations occur in this class, as well as most of the *Leymus cinereus* types, both of which occur in alkaline bottomlands. *Leymus triticoides* and *Suaeda moquinii* are also alkaline bottomland types that occur only in the Lahontan Basin and Northwestern Basin and Range sections of the CRB. Other hot, low-elevation grasslands series include *Sporobolus cryptandrus*, *Nasella pulchra*, and *Aristida longiseta*.

HOT, VERY DRY HERBLANDS (CLASS 4,4)

Grasslands occupying the hottest, well-drained sites characterize this class. Only graminoid vegetation types occupy this extreme bioenvironment in the CRB, the *Oryzopsis hymenoides* series, in the western portion of the Northwestern Basin and Range and Lahontan Basin sections, and the *Leymus ambiguous-Enceliopsis nudicaulis* association in the Beaverhead Mountains and Challis Volcanics sections. Both occur on sandy or gravelly substrates.

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APPENDIX 6. Descriptions of the coarse level of Potential Vegetation classes of the Columbia River Basin. Nomenclature for species names follows Kartesz (1994).

ALPINE & COLD SUBALPINE WETLAND/RIPARIAN TYPES
(COARSE LEVEL CLASS 1,1)

These environments are comprised of the wettest of exclusively alpine and subalpine habitat. The coldest and most snowbound of these sites (alpine) have growing seasons not much exceeding three weeks and have perpetually saturated substrates; the warm extreme has sufficient warmth (mean annual temperature exceeding 10° C) to suppport stunted trees that are also adapted to nearly perpetual growing season substrate saturation. Sites range from just below the highest of ridgelines and mountain masses downward to cirque basins and upper portions of 1st order streams and subirrigated slopes. Regardless of the dominant lifeform these sites are associated with heavy snowpack, sites termed snowbed communities when found in the alpine zone. Because sites generally occupy collecting positions in the landscape soil depths and development tend to be greater than that of surrounding positions; often there is considerable organic accumulation (peat) and leached (spodic) horizons may be found under forest canopies. High winds are a dominant environmental influence responsible for precipitation redistribution, ice particle abrasion and occasionally water deficits. Fire return frequencies are notably long, on the order of 300 to 1000+ years in the forested portions; shrub and herb-dominated vegetation may not experience fire. The alpine portion experiences many periglacial phenomena, most notably solifluction and frost heaving and thrusting, due to saturated soil conditions. Short growing seasons (low forest productivity) and fragility of these environments dictate that watershed and wildlife habitat protection be the dominant land-uses. Much of the land area within this class would qualify as jurisdictional wetland by vegetation, soils and hydrology.

The wettest and coldest sites (alpine) are mostly herb-dominated with *Carex scopulorum*, *C. nigricans*, *C. simulata*, *C. lasiocarpa*, *C. spectabilis*, *Calamagrostis canadensis*, *Deschampsia cespitosa*, *Eriophorum polystachion* dominating various communities both across the CRB and locally within it. Within forb-dominated communities *Senecio triangularis*, *Mertensia ciliata*, and *Caltha leptosepala* predominate. Drier alpine sites within this cell are also graminoid-dominated with those typifying the high elevations (turf types) being *Festuca ovina*, *Carex scirpoidea*, and *Deschampsia cespitosa* and *Trisetum spicatum*; at lower elevations plant stature is taller and *Festuca idahoensis* is the most common dominant with *F. viridula* and *F. scabrella* and *Elymus trachycaulus* constituting regional dominants of high mountain meadows. Common dominants of dwarf shrub dominated alpine snowbeds and wetlands are *Salix arctica*, *S. nivalis*, *S. planifolia*, *Kalmia microphylla*, *Phyllodoce empetriformis* and *Cassiope mertensiana*. Slightly taller shrub dominants of a slightly lower zone are *S. wolfii*, *S. commutata*, *S. farriae*, *Betula glandulosa and Vaccinium occidentale*. Open canopies with relatively short crowns and multiple-aged (size) structure characterize forests. Forests here grade to krummholz types and often exist as islands surrounded by shrub or herbaceous communities. Dominant forest alliances are *Abies lasiocarpa*, *Tsuga mertensiana, Picea engelmannii* and, in cirque basins and headwalls, *Larix lyallii*. Diagnostic/dominant undergrowth ranges from graminoids (*Calamagrostis canadensis*, *Carex disperma*) to forbs (*Streptopus amplexifolius*, *Caltha leptosepala*, *Equisetum arvense*) and shrubs (*Menziesia ferruginea*, *Rhododendron albiflorum*, *Ledum glandulosum*).

COLD, MOIST SUBALPINE FORESTS
(COARSE LEVEL CLASS 1,2)

Occurring in the same elevation zone as the forested portion of CLC 1,1 these forested environments are mostly as cold as those of CLC 1,1 but the effective precipitation is less. Snowload may be appreciable as evidenced by diagnostic plant composition. These sites are mostly of warmer aspects and upper slope positions. Soils are poorly developed, cold and generally have high organic content. Fire return frequency is on the order of 200 to 1000+ years and is primarily stand-replacing in nature though the open canopy nature of structure can promote a mosaic of burned/unburned. Most of this environment is above the limits of productive forests meaning yields are low and stand re-establishment is slow, with shrubfields often persisting for years; however the lower limits of this biophysical setting support productive forest where timber harvest is the major use. Other major land uses within this environment include watershed protection and recreation.

The dominant alliances are *Abies lasiocarpa, Picea engelmannii* (or *P. engelmannii* x *P. glauca* hybrid swarm in Northern Rocky Mountains). Stands in which *Larix lyallii* is a monospecific dominant of tree layer or is combined with *A. lasiocarpa* or *Pinus albicaulis* characterize cirque-basins and headwalls thereof. Stand structure is generally open with non-interlocking canopies and as little as 30% cover. *Pinus contorta, P. albicaulis* and *Larix occidentalis* are important components of seral stages and due to their longevity persist well into the "climax" stage. The undergrowth can be dominated by a variety of lifeforms, from graminoids (*Luzula glabrata* var. *hitchcockii*) and forbs (*Xerophyllum tenax, Clintonia uniflora, Galium triflorum*) to dwarf shrubs (*Vaccinium scoparium, Phyllodoce empetriformis*) and larger shrubs (*Vaccinium deliciosum, V. membranaceum, V. globulare*) and tall shrubs (*Alnus viridis* var. *sinuata, Menziesia ferrruginea*). Two of the most areally extensive plant associations in the CRB east of the continental divide typify this class, *Abies lasiocarpa/V. scoparium* and *A. lasiocarpa-Pinus albicaulis/V. scoparium.*

DRY ALPINE & COLD DRY SUBALPINE PARKLANDS
(COARSE LEVEL CLASS 1,3)

This class ranges from relatively dry and cold alpine habitats, but not so extreme as wind-deflation sites typified by cushion plant communities or fellfields) to forests of dry, wind-impacted positions or more arid climatic regimes. Both low moisture and cold temperatures are strongly limiting. Positions occupied by both forest and non-forest are exposed (wind impacted) uplands feeding 1st and 2nd order streams; all aspects are represented but west- and south-facing slopes predominate. Soils are well-drained and tend to be poorly developed Entisols and Inceptisols. Mountain meadows, developed where deeper and finer-textured soils occur, are often interspersed with forest vegetation creating a "parkland." Fire burning through the open spatial structure of forests within this biophysical environment produces a mosaic of burned and unburned patches, though stand-replacing fire is also prominent in lower elevation forests with a more closed canopy. Grazing impact (primarily sheep) on these already stressed alpine sites is an issue, particularly the susceptibility of nutrient cycles. The broad range of forest environments includes those wherein watershed and wildlife protection is paramount and those of lower elevations where timber harvest is extensive and appropriate, though regeneration can be problematic.

Within the alpine and high subalpine zones this environment is typified by turf and grassland dominated by the various regionally important species including *Kobresia bellardii, Carex brewerii, C. scirpoidea, C. rupestris, Festuca ovina, F. idahoensis, F. viridula,* and *Calamagrostis* *purpurascens*. The eastern portion of the CRB has extensive areas of high elevation calcareous substrates characterized by a mix of *Dryas octopetala* and *Carex rupestris*-dominated turf associations. The dominant forest alliances include *Abies lasiocarpa*, *Picea engelmannii* (and *P.* · *engelmannii* x *P. glauca* swarms), *Pinus albicaulis* and *Pinus contorta*; *Tsuga mertensiana* is much less important in these drier environments. Tall and mid-sized diagnostic shrubs important in moister environments are scarce here but low to dwarf shrubs are characteristic, e.g. *Vaccinium scoparium*, *V. cespitosum*, *V. globulare*, *Ribes montigenum*, and *Juniperus communis*. It is in these drier environments that considerable differentiation is seen among sections as to what ecological species assemblages are represented in this class. In the western CRB *A. lasiocarpa*/*V. scoparium* or *A. lasiocarpa-P. albicaulis*/*V. scoparium* are important (from CLC 1,2 in eastern CRB). In the eastern CRB this environment is often represented by *A. lasiocarpa*/*Juniperus communis*, /*Arnica cordifolia* and /*Calamagrostis rubescens*, especially on calcareous substrates.

VERY DRY ALPINE & TIMBERLINE/COLD SUBALPINE GROVELANDS (COARSE LEVEL CLASS 1,4)

Within the alpine zone these are the driest turf and cushion-plant habitats, those most wind-impacted, swept free of winter snow: consequently they receive their moisture primarily from spring and summer convectional storms. Congeliturbation combined with wind deflation leaves the surface of these immature soils with a rocky pavement. This severe environment is found on south to northwestern aspects, usually upslope position and is most extensively developed along ridgelines and saddles receiving Venturi effects. Some of the lower alpine to subalpine herblands develop on well-drained, unstable, frost-heaved surfaces. This combination of cold temperatures, xeric moisture regime, and unique substrate conditions is found only in the mountains of the north-central, eastern and southern Cascades regions of the CRB, areas also notable for strong summer convectional storms. Shrublands occur on warmer sites from lower alpine to subalpine, but effective moisture is probably less even than that experienced by the higher alpine. Forests of this class are similarly predominantly found on south- and west-facing slopes, made even more xeric by the most influential of forces in this environment, strong drying southwesterly winds. Though lightning strikes may be numerous here, fires consume very little of the landscape at any one time due to lack of fuels and the fact that rain often accompanies the lightning. Productivity is very low in this biophysical setting. Sheep bands are pastured here, where they consume fellfield and cushion plant forbs. Only the lowest elevation forests are suited to timber cutting and here regeneration can be problematic. The recreation and watershed protection values may outweigh all other values.

The alpine turf communities are typically dominated by varying combinations of *Carex elynoides*, *C. rupestris* and *Phlox pulvinata*. *Festuca kingii* virtual monocultures are characteristic of dry, unstable slopes and it may also co-occur with the above species. *Artemisia arbuscula* varieties dominate the dry subalpine, occurring primarily on azonal soils of the southeastern CRB. The Southern Cascades section supports several dwarf shrub dominants. Forest stands are open, generally less than 70% canopy cover, and tree heights are strongly reduced. *Abies lasiocarpa* and *Picea engelmannii* are at the dry extremes of their distribution and repopulate these sites very slowly following disturbance. *Pinus albicaulis* and *P. contorta* are the major species of both seral and long-term stable stands. This biophysical environment is generally beyond the cold limits of *Pseudotsuga menziesii* and other seral conifers. Undergrowth species diagnostic of the driest sites are *Carex rossii*, *C. geyeri* and *Festuca idahoensis*. *Arnica cordifolia* occurs with all the above-listed tree species to define several widespread and areally extensive plant associations.

COOL SUBALPINE WETLAND/RIPARIAN
(COARSE LEVEL CLASS 2,1)

Short, cold-limited growing seasons that do not inhibit growth of trees and saturated substrates for most of the growing season characterize these environments. These riparian and wetland systems are generally associated with 1st order streams, seeps, subirrigated slopes, and heavy snowload sites. Found at high elevations below upper treeline, these environments appear along narrow corridors near subalpine streams and rivers, or in high mountain valleys surrounded by subalpine forests. Soils are generally derived from deep alluvium and are generally high in organic matter. Cold, peat-forming habitats are found here. Wildlife habitat and watershed protection are the dominant land-uses in this environment although livestock grazing and timber harvest are traditional uses in many areas.

Herbaceous-dominated vegetation composed of several *Carex* species (*C. aquatilis*, *C. lasiocarpa*, *C. lanuginosa*, *C. simulata*) wet *Deschampsia cespitosa* types, and *Calamagrostis canadensis* occupy these environments throughout the CRB. These graminoids, along with other meadow-forming species restricted to particular sections of the CRB, grow with a variety of shrub-dominated vegetation types. Tall *Salix* species and *Alnus incana* typify these shrub types although shorter shrubs can be dominants, such as *Alnus viridis* ssp. *sinuata*, *Artemisia cana*, *Betula glandulosa* or *Vaccinium uliginosum*. *Abies lasiocarpa* and *Picea engelmannii* forests dominate these cold, wet environments across the CRB. Sectional variation reflects important differences within this coarse environment. *Abies amabilis*, *Tsuga heterophylla*, *Abies grandis*, *Tsuga mertensiana* and *Thuja plicata* are important in local environments in the northern CRB. These forests typically have multiple-aged stand structure with open canopies. Tall shrubs, such as *Oplopanax horridum*, *Cornus sericea*, *Menziesia ferruginea*, and *Alnus viridis* ssp. *sinuata*, fern and fern-allies, such as *Equisetum arvense*, *Athyrium filix-femina*, *Gymnocarpium dryopteris*) and forbs such as, *Senecio triangularis*, *Streptopus amplexifolius*, are found in association with these subalpine trees.

COOL, MOIST FORESTS
(COARSE LEVEL CLASS 2,2)

This biophysical environment represents the most moderate and highest productivity portion of what is mostly the lower subalpine zone where growing seasons are relatively long. Moisture is limiting near the end of what are typically long dry summers; this is true even in portions of the CRB with strong summer convectional storms. This environment appears on all aspects, though not generally on steep south slopes nor on ridge tops, slope shoulders or any areas with thin soil mantles; most typical positions are lower to toe-slopes and well-drained benches. Soils are well-drained and may span a wide range of orders from Entisols to Spodosols, but generally they are mature enough to show distinct horizonation and eluvial-illuvial zones. The moderate nature of this environment is reflected in the largest number of plant associations of any "subalpine" habitat. Fire, primarily stand-replacing, is the major landscape process with fire return intervals on the order of 50 to 300 years. Insects, primarily pine beetles e.g. mountain pine beetle (*Dendroctonus ponderosae*), and disease, e.g. white pine blister rust (*Cronartium ribicola*) cause significant periodic mortality which predisposes stands to catastrophic fire. The major land use is timber management with livestock production on transitory range, wildlife management and recreation subsidiary uses.

These forests are primarily closed with overlapping canopies and tall crowns. A large number of forest alliances are represented including *Abies amabilis* and *A. concolor* restricted to the Eastern Cascades Section; *Abies grandis* found exclusively west of the Continental Divide; *Abies lasiocarpa* and *Picea engelmannii* are virtually ubiquitous; *Tsuga mertensiana*, *Tsuga heterophylla* and *Thuja plicata* are important from the Cascades to the northern portion of the west slopes of the Rocky Mountain Front Range, as far as maritime climatic influence penetrates in Montana. Diversity of seral tree species is high, including *Pseudotsuga menziesii*, *Pinus monticola*, *P. contorta*, *P. albicaulis*, *Larix occidentalis*, *Abies grandis* and, east of the Continental Divide, *Populus tremuloides* and *P. trichocarpa*. Plant associations defined by *Clintonia uniflora* (as an undergrowth indicator) in conjunction with various tree species probably constitute a greater areal extent of the northcentral CRB than any other plant association within this CLC; *Achlys triphylla* and *Acer circinatum* function similarly in the Eastern Cascades Section. This environment as represented in the southern portion of the CRB is floristically distinct from the rest of the CRB in having *Populus tremuloides*-dominated types with *Symphoricarpos* spp.

COOL, DRY FORESTS
(COARSE LEVEL CLASS 2,3)

These environments constitute the warm and dry portion of the lower subalpine zone and extend to the upper montane. Effective moisture is the primary limiting factor. These sites are found on drier aspects, primarily west- and east-facing, though north slopes are included at lower elevations or in drier climatic regimes. Soils are primarily Alfisols, Entisols, and Inceptisols; they are well-drained and have reduced litter and organic content. The major landscape process is stand-replacing fire; fire return intervals range from 30 to 300 years. Conditions favorable for catastrophic fire are engendered by high tree mortality due to insects (e.g. mountain pine beetle) and disease (e.g. *Armillaria* and *Phellinus* root rot). Timber management is the major land use, followed by transitional range grazing, wildlife management, and recreation. This environment is found in all northern Sections and most of the southern but is quite floristically distinctive in the Lahontan Basin Section.

The number of climax forest alliances represented is reduced from that of moister environments and includes *Pseudotsuga menziesii*, indicating the dry nature of these environments; other climax tree species include *Abies lasiocarpa*, *A. grandis*, *A. amabilis* (Eastern Cascades section only), *Picea engelmannii* and *Tsuga mertensiana*. Major seral tree species are *P. contorta*, *P. albicaulis*, *P. menziesii* and *Larix occidentalis*; the warmest of these habitats also support *P. ponderosa* as a seral species. Some of the most broadly distributed associations are *Abies lasiocarpa/Vaccinium globulare*, */V. membranaceum*, */Xerophyllum tenax*, */V. cespitosum*, */Calamagrostis rubescens*, *P. menziesii/Linnaea borealis*, *P. menziesii/V. cespitosum*, and *Abies grandis/X. tenax*.

COOL, VERY DRY FORESTS
(COARSE LEVEL CLASS 2,4)

This is the warmest and driest of forested subalpine environments. Moisture is severely limiting because this environment tends to occupy positions near ridgelines and on south and west-facing slopes; these aspects are also rendered more dry by prevailing southwesterly winds and the conjunction of high afternoon insolation loads with high ambient air temperatures. Moisture deficits are reflected in the mostly very open stand structure (< 50% canopy cover), however stands can be closed, a condition that causes the virtual elimination of undergrowth. Soil development tends to be minimal but Alfisols are represented; soils are generally well- to excessively drained but their depths range widely. This environment is associated with no special climatic regime, occurring from the Eastern Cascades to the Yellowstone Highlands and Wind River Sections and also occurs in the predominantly calcareous Beaverhead Mountains and Belt Mountains sections. Fire regimes vary from stand replacing to a mosaic of underburns; fire return intervals may be as short as 30 years and as long as 500+ years. These lower productivity sites experience less insect and disease impacts, but are hardly immune, witness the demise of even the driest *Pinus albicaulis* stands under certain climatic regimes. Recreation is probably the primary activity on these sites, slightly ahead of timber management, which is deemed advisable only on the most favorable of these sites; wildlife management and watershed protection are primary goals in the more inaccessible of these sites.

These biophysical environments are the driest capable of supporting the *Abies lasiocarpa* and *Picea engelmannii* climax alliances and the coldest in which *Pseudotsuga menziesii* is a climax species. *Pinus contorta* is a long-persisting dominant in the Eastern Cascades and Wind River Sections and also a common seral species throughout the remainder of this class's representation in the CRB. These environments almost always exceed the cold limits of *Pinus ponderosa*. Plant associations or stands dominated by *Pinus albicaulis* and *Pseudotsuga* are generally open, whereas a number of the *Abies lasiocarpa* associations, particularly *A. lasiocarpa/Arnica cordifolia* are closed. Common and diagnostic undergrowth species include *A. cordifolia*, *Calamagrostis rubescens*, *Carex geyeri*, *Spiraea betulifolia*, *Arctostaphylos uva-ursi* and *Symphoricarpos albus* (or *S. oreophilus*). On calcareous substrates where *Picea engelmannii* and *Pseudotsuga* are favored over other tree species, the important undergrowth indicators are *Senecio streptanthifolius*, *Clematis tenuiloba* (or *C. pseudoalpina*) and *Juniperus communis*. Areally extensive associations within this environment are *P. menziesii/S. betulifolia* and *A. lasiocarpa/A. cordifolia*.

WARM MONTANE WETLAND/RIPARIAN TYPES
(COARSE LEVEL CLASS 3,1)

This biophysical environment provides relatively long growing seasons limited by winter cold. Standing water or substrates that are saturated season-long place limitations on vegetation and never experience any soil drought. These riparian and wetland environments typically occur in lower montane settings below the subalpine forest zone. These environments occur on flats in valley bottoms and canyons, typically with deep soils, throughout the CRB. Fish and wildlife habitat is provided here as well as some timber production. Livestock production has traditionally concentrated in this zone.

The *Carex nebrascensis* association is widespread and best characterizes the herbaceous-dominated communities in this environment. Other modal herbaceous communities include *Eleocharis palustris*, *C. simulata*, *C. aperta*, *C. lanuginosa*, *C. microptera*, *Nuphar lutea* var. *polysepala*, and *Juncus balticus*. Warm, low-elevation variants of the *Glyceria borealis*, *Equisetum fluviatile*, and *Deschampsia cespitosa* types occur here as well as cool, high-elevation variants of *Scirpus acutus*. Warm *Alnus incana*, *Cornus sericea* and some *Salix* (*S. rigida* and *S. lucida* ssp. *lasiandra* associations, as well as the lower elevation, warmer *S. boothii*, *S. lemmonii*, and *S. drummondiana* tall shrub community types appear with the sedges listed above. Also included are the warmer *Artemisia cana* playas, which have understories dominated by *Poa nevadensis*. Riparian forests, typically with tall shrub-dominated understories and an open tree canopy composed of *Populus trichocarpa* occurs throughout the CRB in this environment. *Populus angustifolia*, *Populus tremuloides*, and *Alnus incana* also appear as dominant trees in particular southern sections of the CRB.

WARM, MOIST FORESTS
(COARSE LEVEL CLASS 3,2)

This biophysical environment provides relatively long growing seasons with moderate summer heat associated with relatively mild winters. Moisture is only occasionally limiting and results in the highest productivity associations in this temperature regime. This mid-montane environment appears on all aspects and a variety of soil conditions that are generally well-drained. Fire is a major landscape process in this environment with high to moderate severity and moderate to long return intervals. This environment is represented in all sections except the Columbia Basin, High Lava Plains, Snake River Basalts, Lahontan Basin, Yellowstone Highlands, and Wind River sections. Timber management is the major land use although livestock production, wildlife management, and recreation may occur in this environment.

These forests are closed canopied with a variety of understory vegetation types. In the northwestern montane regions, forests that reflect a maritime climatic influence occupy this class, for example, mild associations in *Abies grandis* and *Thuja plicata* series. As the maritime influence diminishes, the *Pseudotsuga menziesii/Acer glabrum* and *Pseudotsuga menziesii/Linnaea borealis* associations become the representative types for this environment. Most *Populus tremuloides* associations in this temperature regime appear in this moisture class. *Abies concolor* and *Calocedrus decurrens* associations occupy this class in the Sierran region. Early stand development supports numerous seral communities usually dominated by *P. menziesii* or combining with as many as 9 other tree species.

WARM, DRY FORESTS
(COARSE LEVEL CLASS 3,3)

This biophysical environment provides relatively long growing seasons with moderate summer heat associated with relatively mild winters. Associations in this class can be very productive because moisture is limiting only late in the growing season. Most of this environment displays greater winter precipitation than summer. Fire is a major natural process in this environment with moderate to high severity fires with moderate return intervals. This is a common environment across the area, absent only in the High Lava Plains and Lahontan Basin sections.

The *Pseudotsuga menziesii/Physocarpus malvaceus* association typifies this class throughout the Rocky Mountains, although eighty-two other associations have been included in this environment across the CRB. Dry *Abies grandis*, *A. concolor*, *Picea engelmannii*, moist *Pinus ponderosa* and *Populus tremuloides* with moist shrub associations are found in this environment. Both the *Pseudotsuga menziesii/* and *Abies grandis/Calamagrostis rubescens* associations often represents this environment. Sierran forests are represented by *Pinus ponderosa-Pinus jeffreyi/Mahonia repens*, *A. concolor-Pinus monticola-P. ponderosa*, and *P. jeffreyi-Quercus kelloggii* associations. Formation of brushfields with fire-adapted trees, such as *Pinus ponderosa*, *Pinus contorta*, and *Populus tremuloides* are a common feature in this environment.

WARM, VERY DRY FORESTS
(COARSE LEVEL CLASS 3,4)

This biophysical environment is associated with moderate summer heat and provides relatively long growing seasons that are usually truncated by soil drought. Most of this environment displays greater winter precipitation than summer. Fire is a major natural process with moderate to light severity fires with short return intervals. The forests are mid-montane to lower foothills and often associated with shallow soils and other sites that experience soil drought. Livestock grazing and, to a lesser degree, timber harvesting are common landuses.

Bunchgrasses, *Juniperus communis*, *Purshia tridentata*, or *Cercocarpus ledifolius* form associations with *Pseudotsuga menziesii*, *Pinus flexilis*, and *Abies concolor* in this environment. This class represents cooler environments in the central Rockies where *Pinus ponderosa* is often a minor part of the forests and *P. menziesii* is found at lower treeline. *P. flexilis* is part of these open forests in the Beaverhead Mountains, Challis Volcanics, Overthrust Mountains, and Belt Mountains sections. In mild climatic sections such as the Eastern Cascades and Okanagan Highlands, this environment usually is transitional to lower treeline forests dominated only by *P. ponderosa*. *P. ponderosa* and *Pinus jeffreyi* with *Ceanothus velutinus* represent this class in the Southern Cascades section. Fire-adapted trees, such as *Pinus ponderosa*, *Pinus contorta*, and *Populus tremuloides* may be common features in this environment that form mostly open forests or woodlands.

HOT VALLEY & PLAIN WETLAND/RIPARIAN TYPES
(COARSE LEVEL CLASS 4,1)

High summer heat and saturated soils, or flooded and periodically flooded sites typify this bioenvironment. These hot wetland types occur at the lower elevations in the CRB and are generally bottomland habitats. Soils tend to be deep and have high water-holding capacity. These are the hot, wet riparian and bottomland habitats that are invariably flat and deep-soiled. High evapotransportation demand can result in saline or alkaline soils. These environments occur along valley bottoms and streams, and are characterized by tall shrubs which can occasionally form closed canopies. They generally occur as narrow corridors, forming conspicuous stands only in the larger valleys in the less mountainous sections of the CRB. Livestock production and farming are common landuses.

Typha latifolia and *Scirpus acutus* types are the most characteristic herbaceous-dominated communities in this bioenvironment and are widespread across the CRB. Other *Scirpus* species (*S. validus*, *S. maritimus*, *S. pungens*, and *S. americanus*) and *Typha domingensis* associations are found in different sections of the CRB. Several *Distichilis spicata* associations, as well as moist *Leymus cinereus* and some low-elevation *Juncus balticus* types, characterize the drier gradient positions in these environments. *Salix exigua* is the most important shrub species in this environment dominating most of its shrub communities. *Carex sp.*, *Juncus sp.*, *Equisetum sp.*, *Rosa woodsii*, mesic forbs (*Heracleum lanatum* and *Hydrophyllum sp.*), and grasses (primarily *Leymus cinereus*) are the common understory dominants. *Crataegus douglasii*, *Cornus sericea*, *Betula occidentalis*, and *Philadelphus lewisii* are locally important shrubs, in the northern and eastern less mountainous sections of the CRB. *Betula occidentalis*, *Populus fremontii*, *Alnus rhombifolia* and *Salix amygdaloides* are common hardwood tree-dominated riparian communities in this environment. *Pinus ponderosa* and *Pseudotsuga menziesii* may occur in these forests with tall shrubs, whereas Sierran environments have *Tsuga heterophylla* and *Alnus rubra* riparian forests.

HOT, MOIST LOWER TREELINE/FOOTHILLS FORESTS, SHRUBLANDS & HERBLANDS (COARSE LEVEL CLASS 4,2)

This biophysical environment is characterized by generally mild winters, with relatively high summer heat, and low moisture availability that arrives primarily in winter. Found in low elevations near foothills and adjacent plains, it can be found as an important type in all areas in the CRB, on all aspects and slopes, and a variety of soil types. These features combine to provide a growing environment for open, lower treeline woodlands and shrublands. Low intensity, high frequency fires and drought are the dominant natural processes in this environment. Warm, lower montane forests or woodlands at lower treeline occupy this environment only in and adjacent to the Eastern Cascades section and in the Owyhee Uplands. Land use is dominated by farming and livestock production with some timber harvesting.

Festuca idahoensis associations throughout the CRB and *F. scabrella* types in the northeastern sections typify herbaceous-dominated vegetation in this environment. Moist site associated species, such as *Carex hoodii*, *Rosa nutkana*, *R. woodsii*, and *Symphoricarpos albus* occur in the northwestern sections of the CRB. Associated dry site species might include *Koeleria macrantha, Pseudoroegneria spicata, Carex filifolia, Poa secunda, Festuca kingii, Eriogonum heracleoides, Stipa richardsonii,* and *Hieracium cynoglossoides*. Two associations are recognized in the dry *Poa nevadensis* series which are found throughout the Northwestern Basin and Range section in Nevada and Oregon. These grasslands appear in the understory of most of the environment's shrub types. Relatively moist shrublands and montane steppe types characterized by *Cercocarpus ledifolius* stands, *Artemisia tridentata* ssp. *vaseyana* steppe, cool *Purshia tridentata* habitats, montane *Artemisia cana* playas, and high elevation *Artemisia arbuscula* communities dominate this environment. Several other shrub types are supported by this environment. *Pinus ponderosa*, *Quercus garryana*, and *Pinus jeffreyi* with *Purshia tridentata* typify the woodlands. *J. occidentalis* forms transitional communities in this environment and usually appears in woodlands when treeline exists below this environment.

WARM, DRY SHRUB & GRASS-STEPPE, AND LOWER TREELINE FORESTS (COARSE LEVEL CLASS 4,3)

Deep, productive soils, hot, dry summers and and moderate elevations characterize this biophysical environment. Productivity is limited largely by summer drought. While the environment is quite warm in the summers, the winters are usually quite cold. Habitats include the productive shrub steppe habitats, warm grasslands, and the warmest, driest forests, which are equally represented. Soils include ash, loess, and alluvium, usually greater than 10 cm. deep. The forests, shrub-steppe and grasslands habitats are relatively productive, and quite important locally for timber, grazing and dryland agriculture. It is found in all sections of the CRB, but is less significant in the cold, montane sections of Wind River, Overthrust Mountains, Beaverhead Mountains, Challis Volcanics, Bitterroot Mountains, Northern Rockies, Flathead Valley, and Okanogan Highlands.

The forests are characterized by *Pseudotsuga menziesii*, *Pinus flexilis*, *Pinus ponderosa*, and *Juniperus scopulorum*, with bunchgrasses or *Purshia tridentata* in the understories. These form open woodlands in the Blue Mountains and southern Rocky Mountains. The Southern Cascade section is typified by *Juniperous occidentalis* and dry *P. ponderosa/P. tridentata* woodlands. Uncommon *Acer grandidentatum* associations are part of this environment in the eastern portion of the Northwestern Basin and Range section.

Grasslands in this environment are mostly *Pseudoroegneria spicata* associations, occurring in steep, canyon or mountainous terrain with *Balsamorhiza sagittata*, *Festuca idahoensis*, *Poa secunda*, *Stipa comata*, *Pascopyrum smithii* or *Eriogonum heracleoides* codominant. Also included are warm, deep soiled Palouse grasslands and low shrublands (dominated by *Symphoricarpos albus*, *Rosa nutkana*, and *Artemisia tipartata* with *F. idahoensis*, *S. comata*, *Leymus cinereus* or *Oryzopsis hymenoides* understories) which have been largely converted to agriculture. Other shrublands found in this environment are *Artemsia tridentata* ssp. *wyomingensis-Purshia tridentata* and warm *P. tridentata* communities, with an *O. hymenoides*, *S. comata*, *S. columbiana*, *P. spicata* or rarely a *F.idahoensis* understory. Finally, the class includes the cooler examples of *A.tridentata* ssp. *tridentata* steppe, those with *S.columbiana*, *F.idahoensis*, *Pascopyrum smithii* or *P. spicata* understories.

HOT, VERY DRY CANYON SHRUB-STEPPE TO OPEN LOWER TREELINE FORESTS (COARSE LEVEL CLASS 4,4)

This widespread biophysical environment is the modal shrub-steppe of the CRB. It is a warm, very dry environment, with hot, dry summers and cool winters. Moisture in the growing season limits growth. Precipitation falls as snow and rain, usually limited to under 40 cm per year. This class occupies all soils, aspects and slopes, and is found throughout the CRB. It is the dominant environment in most of the southern sections.

The most significant habitats in this environment are typical sagebrush steppe habitat types. The most widespread are the drier big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*, *A. t.* ssp. *vaseyana*) associations, on rocky- or sandy-soiled slopes with *Pseudoroegneria spicata*, *Stipa thurberiana* or *S. comata* as the understory dominants. It includes the more productive, shallow soiled flats with low sagebrush species (*Artemisia arbuscula, A. nova* and *A. rigida*) with a *P. spicata* or *Festuca idahoensis* understory. Also present are the: 1) drier mountain brush types, including *Cercocarpus ledifolius, C. montanus* var. *glaber, Arctostaphylos patula* and *Purshia tridentata* steppe associations; 2) canyon shrublands, including *Glossopetalon nevadense*, *Celtis laevigata* var. *reticulata*, and 3) chapparal communities from the southwestern sections of the CRB, dominated by *Ceanothus cuneatus*, *Arctostaphylos viscida, Quercus breweri, Q. vaccinifolia*, *Holodiscus discolor* and *Prunus subcordata*.

Grasslands and forests compose a minor, but diverse part of this bioenvironment. Dry, shallow-soiled *Pseudoroegneria spicata* grasslands include those where it is codominant with *Poa secunda, Arenaria congesta*, *Sporobolus cryptandrus*, and *Opuntia polyacantha* in canyon grasslands and *Bouteloua gracilis* along the eastern edge of the CRB. *Stipa comata* grasslands are included, as are those dominated by *S. thurberiana* or *S. lemmonii* in the southwestern sections of the CRB. The woodlands in this environment are typified by *Juniperus occidentalis* or *J. osteosperma,* with shrub steppe (*Artemisia* species) providing the common understory associates. *Quercus douglasii, Q. garryana,* and *J. occidentalis* characterize this bioenvironment along with the shrublands in the California sections, while *Pseudotsuga menziesii, J. osteosperma* and *Cercocarpus ledifolius* woodlands are the forests of this environment from the Owyhee Uplands.

HOT, ARID SHRUB-STEPPE
(COARSE-LEVEL CLASS 4,5)

This bioenvironment is defined by two different types of habitats: the hottest, driest sagebrush steppe vegetation in the CRB, along with the cooler, salt desert shrub types. The sagebrush steppe parts of the class are found on scablands, recent lava flows and shallow soiled flats, with widely spaced low shrubs and up to 60% cover of exposed basalt. Dominant shrubs include *Artemisia rigida*, *A. arbuscula*, *A. nova*, *A. frigida* and *A. tridentata* ssp. *wyomingensis*. Also included here are the *Erigonum*-dominated scablands, with *E. douglasii*, *E. niveum*, *E. sphaerocephalum*, and *E. thymoides* associations. The grasses within these habitats are characterized by *Poa secunda* or *Elymus elymoides*, athough *Stipa comata* and *Pseudoroegneria spicata* can be locally important. The salt desert shrub types in this class occur on flats to steep slopes of all aspects, but generally are found only in the southern portions of the CRB, in Nevada, southeastern Oregon and southwestern Idaho. These are mid-sized to low shrubs, also widely spaced, usually on deep soiled flats to gentle slopes, although occasionally on steep rimrock, talus or cliffs. Soils include alkaline sands and silts, ash, and stony weathered rhyolite or basaltic clays. *Atriplex canescens* and *Grayia spinosa* are the most important series, but include *Ephedra* sp., *Sphaeromeria argentea* and *Salvia dorii* associations as well. The understory is generally characterized by bare ground, but *Pseudoroegneria spicata*, *Elymus elymoides*, *Poa secunda*, *Oryzopsis swallenii* are important components of the vegetation.

VERY HOT, SEASONALLY-FLOODED SALT-DESERT BASINS
(COARSE-LEVEL CLASS 5,3)

Flat, seasonally flooded, desert basins characterize this bioenvironment. Soils are alkaline clays and silts, and the basins often lie between fault-block mountain ranges. It includes the hot, moist, basin shrublands and grasslands. The enviromnent occurs on closed-basin lake margins and valley bottoms, on playas which are annually flooded, as well as in desert stream floodplains. It is found largely in the southern sections of the CRB, and includes three different types of habitats. The most significant are the seasonally flooded, alkaline bottomlands. *Sarcobatus vermiculatus* usually is the only shrub dominating these open playas, but sometimes can be codominant with *Atriplex confertifolia*. Either *Distichlis spicata* or *Leymus cinereus* often provide significant cover in the understory, and often form grassland associations in shrub-free areas. *Leymus triticoides* and *Suaeda moquinii* are also alkaline bottomland types that occur only in the Lahontan Basin and Northwest Basin and Range sections of the CRB. The second group of habitats in this bioenvironment occur in less alkaline areas, with streams removing some of the moisture. Vegetation includes the warmest *Artemisia cana* playas with *L. cinereus* or *Muhlenbergia richardsonis* in the understory. The third group includes the deep-soiled, seasonally-flooded valley bottoms usually dominated by *Artemisia tridentata* ssp. *tridentata*, sometimes codominant with *S. vermiculatus*. These can have *L. cinereus*, *Festuca idahoensis*, *Stipa comata*, or *Pseudoroegneria spicata* as the major grasses. This last group also has some grassland series including *Sporobolus cryptandrus*, *Stipa pulchra*, and *Aristida longiseta*.

VERY HOT, VERY DRY SALT-DESERT SHRUB
(COARSE-LEVEL CLASS 5,4)

This bioenvironment includes the hot and dry basins and slopes, which receive sufficient moisture to support some bunchgrass and forb production. The environment includes flats, gentle slopes and some steeper gradients, on all aspects. Substrates are generally sandy, gravely or stoney silts, or unconsolidated ashes. *Sarcobatus vermiculatus*, *Atriplex confertifolia*, *A. canescens* and *Krascheninnikovia lanata* characterize the important habitats. These salt desert shrubs are often codominant with *Artemsia tridentata* ssp. *wyomingensis* or *A. nova* in this environment. They occur on gentle slopes and flats, and on the margins of the dry playas. The soils are usually deep and alkaline, but associations found on stony or sandy soils do occur. Important grasses of the southern sections include *Oryzopsis hymenoides*, *Elymus elymoides*, and *Poa secunda*, occurring between salt-desert shrubs and as associations. The *Leymus ambiguous-Enceliopsis nudicaulis* association represents this bioenvironment in the Beaverhead Mountains and Challis Volcanics sections.

This bioenvironment generally occurs on the margins of the basins in the southern sections of the CRB, and is generally less significant than either the wetter, seasonally flooded basins (CLC 5,3), or the driest of the basins (CLC 5,5).

VERY HOT, ARID SALT-DESERT SHRUB
(COARSE-LEVEL CLASS 5,5)

The hottest and driest habitats in the CRB define this bioenvironment. They dominate many of the low, hot basins of Nevada, southeastern Oregon, southern Idaho and northwestern Utah. They are characterized by widely spaced, tall shrubs on playas, barrens or low dunes. Salt desert shrubs are the only important species, with *Sarcobatus vermiculatus* (both *S. v.* var. *vermiculatus* and *S. v.* var. *baileyi*) and *Atriplex confertifolia* being the most significant. *Grayia spinosa*, *Atriplex nuttalii*, *Psorothamnus polydenius* var. *polydenius*, *Ephedra nevadensis* and *Allenrolfea occidentalis* associations are also included within the class. The sparse understory is often barren, or characterized by isolated plants of *Oryzopsis hymenoides*, *Elymus elymoides*, *Sporobolus airoides*, *Lycium shockleyi*, *Kochia americana*, *Nitrophila occidentalis*, *Suaeda nigra* and desert annuals.

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APPENDIX 7. Coarse level PV classification: Distribution of section level PV classes,as grouped at the regional level, in the coarse temperature-moisture gradient matrix. The forest, shrubland and herbland section PV classes are shown for each coarse class.

	WET (1)						MOIST (2)					
	COARSE CLASS 1,1						COARSE CLASS 1,2					
	FORESTS F 1,1		SHRUBS S 1,1 1,2		HERBS H 1,1 1,2 2,2		FORESTS F 1,2		SHRUBS		HERBS	
	Sections	Classes	Sections	Classes	Sections	Classes	Sections	Classes	Sections	Classes	Sections	Classes
			342B–E	1,1	342B–E	1,1 1,2 2,2						
	M242C	1,1	M242C	1,1 1,2	342B–W	1,1 2,2 2,3	M242C	1,2	NONE		NONE	
COLD (1)	M331A	1,1	M261G	1,1	M242C	1,1 1,2 2,3	M331A	1,2				
	M331D	1,1	M331A	1,1	M261G	1,1 2,2 3,3	M331D	1,2				
	M331J	1,1	M331J	1,1	M331A	1,1 1,2 2,2	M331J	1,2 2,2				
	M332A	1,1 1,2	M332A	1,1	M331D	1,3 1,4 2,4	M332B	1,3				
	M332B	1,1 1,2	M332B	1,1	M331J	1,2 2,2	M332C	1,2				
	M332C	1,1	M332C	1,1 1,2	M332B	1,1 2,2 2,3	M332D	1,2				
	M332D	1,1	M332D	1,1 1,2	M332C	1,1 1,3	M332E	1,2				
	M332E	1,1	M332E	1,1	M332D	1,1 1,3 2,2 3,2	M332G	2,2				
	M332F	1,1	M332F	1,1	M332E	1,1 1,2 2,2	M333A	1,3				
	M332G	1,3	M333A	1,2 2,1	M332F	1,1 1,2 2,2	M333D	1,2				
	M333A	1,1 1,2	M333B	1,1 1,2	M332G	1,1 1,3 2,2 2,3 2,4						
	M333B	1,1 1,2	M333C	1,1 1,2	M333A	1,1 1,2 1,3						
	M333C	1,1 1,2	M333D	1,1 1,2	M333B	1,1 1,2 2,2 3,3						
	M333D	1,1			M333C	1,1 1,2 2,2 3,3						
					M333D	1,1 1,2 2,3						

COLD
(1)

DRY
(3)

COARSE CLASS 1,3					
FORESTS	F 1,3	SHRUBS	S 1,3	HERBS	H 1,3
Sections	Classes	Sections	Classes	Sections	Classes
342C	1,3	M242C	2,4		
M242C	1,3	M261D	2,3	342B-W	1,2
M261D	1,2	M261G	1,2	M242C	1,3 1,4
M331A	1,3	M332A	2,3	M331A	1,3
M331D	1,3	M332C	1,3 3,3	M331J	1,3
M331J	1,3	M332D	1,3 3,3	M332A	1,3
M332A	1,4	M332E	1,2	M332E	1,3
M332C	1,3	M332F	1,2	M332F	1,3
M332D	1,3				
M332E	1,3				
M332F	1,2 1,3				
M332G	1,4				
M333B	1,3				
M333C	1,3				
M333D	1,3				

VERY DRY
(4)

COARSE CLASS 1,4					
FORESTS	F 1,4	SHRUBS	S 1,4 2,4	HERBS	H 1,4 2,4
Sections	Classes	Sections	Classes	Sections	Classes
M242C	1,4	342B-E	2,4	M332C	1,4
M261D	1,4	342D	2,4	M332D	1,4 2,4
M261G	1,4	M261G	1,4	M332E	1,4 2,4
M331A	1,4 2,4	M331A	1,4	M332F	1,4 2,4
M331D	1,4	M332E	1,4		
M331J	1,4	M332F	1,4		
M332B	1,4				
M332C	1,4				
M332D	1,4				
M332E	1,4				
M332F	1,4				
M333A	1,4				
M333B	1,4				
M333C	1,4				
M333D	1,4				

COOL (2)

WET (1)

COARSE CLASS 2,1

FORESTS F 2,1		SHRUBS S 2,1		HERBS H 2,1	
Sections	Classes	Sections	Classes	Sections	Classes
342B–E	1,1	342B–E	2,1	341E	2,1
342C	1,1	342B–W	1,1 2,1	342B–E	2,1
M242C	2,1 3,1	342C	2,1	342B–W	2,3
M331A	2,1	342D	2,1	342C	2,1
M331D	2,1	M242C	2,1	342D	2,1
M331J	2,1 3,1	M261D	3,1	M242C	2,1 2,2
M332A	2,1 3,1	M261G	2,1	M261D	2,1
M332B	2,1 3,1	M331A	2,1	M261G	2,1
M332C	2,1 3,1	M331D	1,1 2,1	M331A	2,1
M332D	2,1	M331J	2,1	M331D	1,1 1,2
M332E	2,1	M332A	2,1	M332A	2,1
M332F	2,1	M332B	2,1 2,2	M332B	1,1 2,1 3,1
M332G	2,1	M332C	2,1 2,2	M332C	1,2
M333A	2,1	M332D	2,1 2,2	M332D	1,2 2,1
M333B	2,1 3,1	M332E	2,1	M332E	2,1
M333C	2,1 3,1	M332F	2,1	M332F	2,1
M333D	2,1 3,1	M333A	1,1	M333A	2,1 3,1 3,2
		M333B	2,1 2,2	M333B	2,1
		M333C	2,1	M333C	2,1
		M333D	2,1	M333D	2,1 2,2 3,1

MOIST (2)

COARSE CLASS 2,2

FORESTS F 2,2		SHRUBS		HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
341E	1,2				
342C	1,2 2,1 2,2	NONE		NONE	
M242C	2,2 3,2				
M261G	2,1				
M331A	2,2				
M331D	2,2				
M331J	3,2				
M332A	2,2 2,3				
M332B	2,2 3,2				
M332C	2,2				
M332D	2,2				
M332E	2,2				
M332F	2,2				
M332G	2,3				
M333A	2,2 3,1				
M333B	2,2 3,2				
M333C	2,2				
M333D	2,2				

	DRY (3)					
	COARSE CLASS 2,3					
	FORESTS	F 2,3	SHRUBS		HERBS	
	Sections	Classes	Sections	Classes	Sections	Classes
COOL (2)	341E	1,3				
	342B–E	1,2	NONE		NONE	
	342B–W	1,2				
	M242C	2,3				
	M261D	1,3 2.1 2,2				
	M261G	1,1 1,2 1,3 2,2 2,3				
	M331A	2,3 3,2				
	M331D	2,3				
	M331J	2,3				
	M332A	1,3 2,4				
	M332B	2,3				
	M332C	2,3				
	M332D	2,3				
	M332F	2,3				
	M332G	2,4				
	M333A	2,3				
	M333B	2,3				
	M333C	2,3				
	M333D	2,3				

	VERY DRY (4)					
	COARSE CLASS 2,4					
	FORESTS	F 2,4	SHRUBS		HERBS	
	Sections	Classes	Sections	Classes	Sections	Classes
COOL (2)	M242C	2,4				
	M331D	2,4	NONE		NONE	
	M331J	2,4				
	M332D	2,4				
	M332E	2,3				
	M333A	2,4				
	M333B	2,4				

WARM
(3)

WET
(1)

COARSE CLASS 3,1

FORESTS	F 3,1	SHRUBS	S 3,1	HERBS	H 3,1
Sections	Classes	Sections	Classes	Sections	Classes
331A	2,1	341E	3,1	331A	1,2 3,1
342B-E	2,1	342B-E	3,1	341E	3,1
342B-W	2,1	342B-W	3,1	342B-E	3,1
342D	2,1	342C	3,1	342B-W	2,1 3,1
342H	1,1	342D	1,1 3,1	342C	3,1
342I	1,1	M242C	4,2	342D	3,1
M331A	3,1	M261D	1,1	342H	1,1
M331D	3,1	M261G	3,1 3,2	M242C	3,1
M332B	4,1	M331A	3,1	M331A	3,1
M332C	4,1	M331D	3,1 3,2	M331D	3,1
M332D	3,1	M331J	3,1	M332A	3,1
M332E	3,1	M332A	3,1	M332B	3,2
M332F	3,1	M332B	3,1 3,2	M332D	3,1
M333B	4,1	M332C	3,1	M332E	3,1
M333C	4,1	M332D	3,1	M332F	3,1
M333D	4,1	M332E	3,1	M333B	3,1 3,2
		M332F	3,1	M333C	3,1 3,2
		M332G	2,1 3,2	M333D	3,2
		M333A	3,1		
		M333B	3,1		
		M333C	3,1		
		M333D	2,2 3,1		

MOIST
(2)

COARSE CLASS 3,2

FORESTS	F 3,2	SHRUBS		HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
342B-E	2,2 2,3 3,2				
342B-W	1,1 2,2 2,3 3,2	NONE		NONE	
342C	3,1				
342D	3,2				
M261D	3,1				
M261G	3,1				
M331D	3,2 4,2				
M332A	3,2 3,3				
M332B	2,4 4,2				
M332C	3,2				
M332D	3,2				
M332E	3,2				
M332F	3,2				
M333A	3,2				
M333B	4,2				
M333C	3,2 4,2				
M333D	3,2 4,2				

WARM
(3)

DRY
(3)

COARSE CLASS 3,3

FORESTS	F 3,3	SHRUBS		HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
331A	1,2 1,3				
342B-E	1,3	NONE		NONE	
342B-W	1,3				
342C	2,3				
342D	2,3				
342H	1,2				
342I	2,2				
M242C	3,3				
M261D	2,3 3,2 3,4				
M261G	3,2				
M331A	3,3 3,4 4,2 4,3				
M331D	3,3 4,3				
M331J	3,3				
M332A	3,4				
M332B	3,3 3,4 4,3				
M332C	2,4 3,3				
M332D	3,3 3,4				
M332E	2,4 3,3 4,1 4,2				
M332F	3,3 3,4				
M332G	3,2 3,3 3,4				
M333A	3,3				
M333B	3,3 3,4 4,3				
M333C	2,4 3,3 3,4				
M333D	2,4 3,3 3,4				

VERY DRY
(4)

COARSE CLASS 3,4

FORESTS	F 3,4	SHRUBS		HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
342D	3,4				
M242C	3,4	NONE		NONE	
M261D	3,3				
M261G	3,3				
M331D	3,4				
M331J	3,4				
M332C	4,3				
M332D	4,3				
M332E	3,4 4,3				
M332F	2,4 4,4				
M333A	3,4				
M333B	4,4				
M333D	4,4				

HOT
(4)

WET
(1)

COARSE CLASS 4,1

FORESTS	**F 4,1**	**SHRUBS**	**S 4,1**	**HERBS**	**H 4,1 4,2**
Sections	Classes	Sections	Classes	Sections	Classes
331A	1.1 2,1 3,1 4,1	331A	3,3	341E	4,1 4,2
341E	4,1	341E	4,1	342B-E	4,1 4,3
342B-E	3,1 4,1	342B-E	4,1	342B-W	4,1 4,2
342B-W	3,1 4,1	342B-W	4,1	342C	4,2
342C	4.1	342D	4,1	M242C	4,1
342H	2,1 3,1 4,1	342I	2,1 3,1	M261D	4,1
342I	3,1 4,1	M261G	4,1	M261G	3,2 4,1
M261D	4,1	M331D	4,1	M331A	4,1
M332A	4,2	M332A	4,1	M332B	4,1
M332D	4,1	M332C	4,1	M332C	4,2
M332G	3,1	M332D	4,1	M332D	4,1 4,2
M333A	4,1	M332E	4,1	M332F	4,1
		M332F	4,1	M332G	4,2
		M333B	3,2 4,2	M333B	4,1
		M333C	3,2	M333C	4,1
		M333D	3,2 4,2	M333D	4,1

MOIST
(2)

COARSE CLASS 4,2

FORESTS	**F 4,2**	**SHRUBS**	**S 2,2**	**HERBS**	**H 2,3 3,2**
Sections	Classes	Sections	Classes	Sections	Classes
331A	2,2	341E	1,2	331A	2,2 2,3
342C	3,3 3,4	342B-E	1,2 2,2	341E	3,2 3,3
342H	1,3	342B-W	1,3 2,2	342B-E	3,2
M242C	4,2 4,3	342C	1,2 2,2	342B-W	3,2
M261D	4,2	342D	1,2	342C	2,2 3,3
M261G	4,3	342H	1,1 2,2	342D	3,2
M333A	4,3 4,4	342I	2,2	342I	1,1 2,2
		M242C	2,3	M242C	3,3
		M261D	2,2	M331A	2,3 3,2 3,3
		M261G	2,2 2,3 3,3	M331D	2,3
		M331A	2,2 2,3	M331J	3,3
		M331D	1,3 2,2 2,3	M332B	3,3
		M331J	2,2 2,3 3,2 3,3	M332C	3,3
		M332A	4,4	M332D	2,3 3,3
		M332B	3,3	M332E	2,3 3,3
		M332C	2,3 3,2	M332F	2,3
		M332D	2,3 3,2	M332G	3,3
		M332E	2,2	M333A	2,3 3,3
		M332F	1,3 2,2	M333B	2,3 3,4 4,3
		M332G	3,3 4,3	M333C	2,3 3,4 4,4
		M333A	3,3	M333D	3,3 3,4 4,3
		M333B	3,3		
		M333C	2,2 3,3		
		M333D	3,3		

DRY
(3)

VERY DRY
(4)

HOT
(4)

COARSE CLASS 4,3

FORESTS	F 4,3	SHRUBS	S 3,2	HERBS	H 3,3
Sections	Classes	Sections	Classes	Sections	Classes
331A	3,2	342B-E	3,2	331A	3,3
342B-E	3,3	342B-W	3,2	342B-E	3,4
342B-W	3,3 4,3	342D	3,2	342B-W	3,3 3,4
342H	2,3	342H	4,2	342C	2,3
342I	2,3 4,4	342I	3,2	342D	2,3
M242C	4,4	M242C	4,3	342H	2,2
M261D	4,3	M331A	3,2 3,3	342I	3,2
M331A	4,4	M331D	3,4	M242C	4,3
M331J	4,4	M332C	4,2	M261G	3,4
M332A	4,4	M333D	4,4	M331A	3,4 4,3
M332B	4,4			M332B	4,4
M332C	3,4 4,4			M332C	4,3
M332D	4,4			M332D	4,3
M332G	4,3 4,4				

COARSE CLASS 4,4

FORESTS	F 4,4	SHRUBS	S 2,3 3,3	HERBS	H 3,4
Sections	Classes	Sections	Classes	Sections	Classes
341E	3,3 4,4	331A	4,3	331A	3,4 4,4
342B-E	3,4 4,4	341E	1,3 2,2 2,3	342C	4,3
342B-W	3,4 4,4	342B-E	1,3 1,4	342H	3,3 3,4 4,3
342C	4,3 4,4		2,3 3,3 3,4 4,2	342I	3,3 4,4
342H	3,3 3,4 4,3 4,4	342B-W	1,2 1,4 2,3	M242C	4,4
M261D	4,4	342C	1,1 1,3 2,3 3,2	M261G	4,3 4,4
M261G	4,4	342D	2,2 2,3 3,3	M331A	4,4
M331D	4,4	342H	3,2 3,3	M331J	4,4
M332E	4,4	342I	2,3 2,4 3,3 3,4	M332C	4,4
		M242C	1,3 1,4 3,3	M332D	4,4
			3,4 4,4	M332E	3,4
		M261D	1,3 3,2	M332F	3,4
			3,3 3,4 4,3	M332G	3,4 4,4
		M261G	3,4 4,3	M333B	4,4
		M331A	2,4 4,4	M333D	4,4
		M331D	2,4 3,3 4,3		
		M331J	4,4		
		M332B	3,4 4,4		
		M332C	2,4 4,4		
		M332D	2,4 3,4 4,4		
		M332E	2,3 3,3 3,4		
		M332F	2,3 3,3		
		M332G	4,4		
		M333A	2,4 4,3 4,4		
		M333B	4,4		

VERY HOT
(5)

COARSE CLASS 5,3

FORESTS		SHRUBS	S 4,2	HERBS	H 4,3
Sections	Classes	Sections	Classes	Sections	Classes
		341E	3,2	331A	3,2 4,3
NONE		342B-W	4,2	341E	4,3
		342C	4,1 4,3	342B-W	4,2 4,3
		342H	4,1	342C	3,2
		342I	4,3	342H	4,1
		M261G	4,2	342I	4,2 4,3
		M332D	4,2	M261D	4,4
		M333A	4,2	M261G	4,2
				M331D	4,4
				M332G	4,3

COARSE CLASS 5,4

FORESTS		SHRUBS	S 4,3	HERBS	H 4,4
Sections	Classes	Sections	Classes	Sections	Classes
		341E	4,2	341E	4,4
NONE		342B-E	4,3	342B-W	4,4
		342C	3,4 4,4	M332E	4,4
		342D	4,4	M332F	4,4
		M332D	4,3		
		M332E	4,3		

ARID
(5)

HOT
(4)

COARSE CLASS 4,5

FORESTS		SHRUBS	S 3,4	HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
		331A	3,4 4,4		
NONE		341E	3,3 3,4	NONE	
		342B-W	2,4 3,3 3,4		
		342C	2,4 3,3		
		342D	3,4		
		342H	3,4 4,3 4,4		
		342I	4,4		
		M261G	2,4		
		M331D	4,4		
		M332E	4,4		
		M332F	4,3 4,4		

VERY HOT
(5)

COARSE CLASS 5,5

FORESTS		SHRUBS	S 4,4	HERBS	
Sections	Classes	Sections	Classes	Sections	Classes
		341E	4,3 4,4		
NONE		342B-E	4,4	NONE	
		342B-W	4,3 4,4		
		M261G	4,4		

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APPENDIX 8. List of plant associations in all section level classes, section by section, including vegetation-site rules model calibration.

331A PALOUSE PRAIRIE SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	PIPO/CRDO2		NOT MAPPED	
1	2	ABGR/CLUN2	1220-1828	FLAT,NE	LT30
1	2	ABLA/CLUN2			
1	2	THPL/CLUN2			
1	3	PSME/PHMA5	1067-1676	ALL	LT60
2	1	ALRH2-ABGR			
2	2	PIPO/FESC	762-1676	ALL	LT30
2	2	PIPO/PHMA5			
2	2	PIPO/SYAL			
3	1	ALRH2/AMAL2	458-1219	FLAT,SW	LT30
3	1	ALRH2/BEOC2			
3	1	POTR15-ALRH2			
3	1	POTR15/CIDO			
3	1	SALUL			
3	2	PIPO/FEID	305-1219	ALL	LT30
3	2	PIPO/PSSP6			
4	1	ALRH2/CELAR		NOT MAPPED	

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
3	3	CRDO2/HELA4	762-1219	FLAT,SW	LT30
3	3	CRDO2/SYAL			
3	4	ARRI2/POSE	153-304	SW	5-29
3	4	ERNI2/POSE			
4	3	CELAR/PSSP6		NOT MAPPED	
4	3	GLNE3/PSSP6			
4	3	RHGL/PSSP6			
4	4	ERMI4-PHOR2		NOT MAPPED	
4	4	ERSP7-POSE			

HERBACEOUS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	2	DECE		NOT MAPPED	
2	2	PSSP6-ERHE2	458-1676	ALL	LT60
2	2	FESC-FEID			
2	3	FEID/SYAL	458-1676	ALL	LT60
2	3	RONU/FEID			
2	3	FEID-KOMA			
2	3	CAHO5-FEID			
3	1	CANE2		NOT MAPPED	
3	2	LECI4	305-1219	ALL	LT30
3	3	PSSP6-FEID (CANYON)	153-1676	ALL	LT60
3	3	PSSP6-FEID (PALOUSE)			
3	3	PSSP6-BASA3-POSE			
3	4	STCO4-POSE	610-761	SW	5-29
4	3	SPCR-POSE	153-457	FLAT,SW	LT30
4	3	ARLO3-POSE			
4	4	PSSP6-POSE	153-914	FLAT,SW	LT60
4	4	PSSP6-OPPO-(POSE)			

341E LAHONTAN BASIN SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	2	POTR5/SYOR2/TALL FORB	2439–2590	NE	30–59
1	3	POTR5/ARTR2	2134–2438	NE	30–59
3	3	JUOS/PSSP6	2134–2438	FLAT,SW	LT60
3	3	JUOS/ARTR2			
3	3	JUOS/ARTR2/ORHY			
4	1	POFR2/SAGE2		NOT MAPPED	
4	4	JUOS	1982–2133	SW	5–59
4	4	JUOS/BARREN			
4	4	JUOS/ARNO4/ROCK			
4	4	JUOS/ARNO4			
		SHRUBLANDS			
1	2	ARTRV/LECI4	1677–2895	ALL	ALL
1	3	CELE3/ARTR2	2439–2895	NE	5–59
1	3	CELE3/PSSP6			
2	2	ARTRT/FEID	1677–2743	ALL	LT60
2	2	ARTRV/PSSP6			
2	3	ARTRT/PSSP6	1524–2590	ALL	LT60
3	1	SALA6/BARREN			
3	1	SALA6/ROWO/GRASS–FORB			
3	2	ARTRT/LECI4	1677–1981	FLAT	FLAT
3	3	GRSP–EPVI	1220–1981	ALL	LT60
3	3	GRSP–PRAN2			
3	3	ARNO4/HIJA			
3	3	ARNO4/PSSP6			
3	3	ATCA2–KRLA2			
3	3	ATCA2–ARTR2			
3	3	ARTRW8/PSSP6			
3	4	ATCO/HIJA	1220–1828	NE, SW	5–59
3	4	GRSP–ARSP5			
3	4	GRSP–LYAN			
3	4	ARNO4/ORHY			
3	4	ARNO4/STCO4			
3	4	ATCA2/ORHY			
3	4	ARTRW8–ATCO			
4	1	SAEX		NOT MAPPED	
4	2	SAVE4–CHNA2	1067–1676	FLAT	FLAT
4	3	ALOC2	1067–1523	FLAT,NE	LT30
4	3	ATCO–ARSP5–SAVE4			
4	3	ATCO–KRLA2			
4	3	SAVE4			
4	3	SAVE4 (DUNE)			
4	3	KRLA2			
4	3	ATCA2/SPAI			
4	4	ATCO	915–1523	NE,SW	5–59
4	4	ATCO/ARSP5			
4	4	ATCO/ARSP5/KRLA2			
4	4	ATCO/ARSP5/ORHY			
4	4	ATCO–EPNE			
4	4	ATCO/KOAM			

TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	VEGETATION–SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	4	ATCO–LYSH			
4	4	ATCO/ORHY			
4	4	SAVE4/ATCO/ARSP5			
4	4	SAVE4/ORHY			
4	4	PSPOP/ORHY			
		HERBACEOUS			
2	1	CARO6		NOT MAPPED	
3	1	CANE2		NOT MAPPED	
3	2	PONE3		NOT MAPPED	
3	3	LETR5–CAREX		NOT MAPPED	
3	3	JUBA			
3	3	CADO2			
4	1	SCAM2		NOT MAPPED	
4	1	SCPU3			
4	1	ELPA3			
4	1	ELPA3–JUBA			
4	1	TYDO			
4	1	TYLA			
4	2	ELPA3–DISP		NOT MAPPED	
4	3	DISP	915–1066	FLAT	FLAT
4	3	SPAI–DIST3			
4	3	SUMO			
4	4	ORHY SERIES		NOT MAPPED	

342B–E NORTHWESTERN BASIN & RANGE SECTION: EASTERN PORTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	ABLA/STAM2		NOT MAPPED	
1	1	PICEA/COSE16			
1	1	PICEA/EQAR			
1	2	ABLA/RIMO2	2286–3200	ALL	LT60
1	2	ABLA/CARU			
1	2	ABLA/ACGL			
1	2	ABLA/MARE11			
1	2	ABLA/CARO5			
1	2	ABLA/ACRU2			
1	2	ABLA/VAGL			
1	2	ABLA/OSCH			
1	2	ABLA/PERA4			
1	2	ABLA/PHMA5			
1	3	PSME/MARE11	2134–2285	NE	30–59
1	3	PSME/CARU			
1	3	POTR5/SHCA			
2	1	ALIN2/COSE16		NOT MAPPED	
2	1	ALIN2/MESIC FORB			
2	1	ALIN2/MESIC GRAMINOID			
2	2	PSME/ACGL		NOT MAPPED	
2	2	PSME/OSCH			
2	2	POTR5/AMAL2–SYOR2/TALL FORB			
2	3	PSME/SYOR2	1982–2590	NE	5–59
2	3	PSME/PHMA5			
2	3	POTR5/TALL FORB			
2	3	POTR5/SYOR2/TALL FORB			
2	3	POTR5/SYOR2/THFE			
2	3	POTR5/AMAL2/TALL FORB			
2	3	POTR5/SYOR2/CARU			
2	3	POTR5/AMAL2–SYOR2/CARU			
3	1	BEOC2/COSE16		NOT MAPPED	
3	1	BEOC2/MESIC FORB			
3	2	POTR5/WYAM		NOT MAPPED	
3	2	POTR5/THFE			
3	2	POTR5/AMAL2–SYOR2/THFE			
3	2	POTR5/AMAL2/THFE			
3	3	ACGR3/CARU		NOT MAPPED	
3	3	PSME/CELE3			
3	3	PIFL2/CELE3			
3	3	PIFL2/MARE11			
3	4	PIMO–JUOS/CELE3/PSSP6	1677–2438	ALL	LT60
3	4	JUOS/PUTR2–SYOR2/PSSP6			
3	4	PIMO–JUOS/ARTRV/PSSP6			
3	4	PIMO–JUOS/LECI4			
3	4	PIMO–JUOS/PRVI			
4	1	ACNE2/COSE16		NOT MAPPED	
4	1	ACNE2/EQAR			
4	1	POAN3/BEOC2			
4	1	POAN3/COSE16			
4	1	POAN3/ACGR3			

TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	VEGETATION–SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	4	JUOS/ARTR2	1220–2133	ALL	LT30
4	4	JUOS/STCO4			

SHRUBLANDS

TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	PEFL15/DECE	2591–3047	FLAT	
1	1	SAWO/CAAQ			
1	1	SAWO/DECE			
1	1	SAWO/MESIC FORB			
1	2	CELE3/SYOR2	1829–2895	ALL	LT60
1	3	CELE3/PSSP6	1829–2590	ALL	LT60
1	3	ARTRV–SYOR2/FEID			
1	3	ARTRV–SYOR2/BRCA5			
1	4	ARTRV–SYOR2/PSSP6	2134–2285	NE	30–59
2	1	ARCAV2/DECE	2134–2743	FLAT	FLAT
2	1	COSE16/HELA4			
2	1	SAGE2/CARO6			
2	1	SAGE2/CAAQ			
2	1	SAGE2/MESIC GRAMINOID			
2	1	SAGE2/MESIC FORB			
2	1	SABO2/MESIC GRAMINOID			
2	1	SABO2/MESIC FORB			
2	1	SABO2/EQAR			
2	1	SABO2/CANE2			
2	1	SABO2/CACA4			
2	1	SABO2/CARO6			
2	1	SABO2/CAAQ			
2	2	ARTRV/FEID	1982–2590	ALL	LT60
2	2	ARTR4/FEID			
2	2	ARTR4/PSSP6			
2	3	ARTRV/PSSP6	1829–2438	ALL	LT60
2	3	ARTRV/LECI4			
2	4	ARARL/FEID		NOT MAPPED	
3	1	SAEX/MESIC GRAMINOID	1220–2133	FLAT	FLAT
3	1	ROWO			
3	2	ARTR2/FEID	1220–2133	ALL	LT60
3	3	ARTRW8/PSSP6	1220–2133	ALL	LT60
3	4	ARAR8/FEID	1220–1828	ALL	LT30
4	1	SAEX/BARREN	1220–1828	FLAT	
4	1	SAEX/MESIC FORB			
4	1	SAEX/MESIC GRAMINOID			
4	2	ARTRT/PSSP6	1220–1523	FLAT	FLAT
4	2	ARTRT/FEID			
4	3	ATCO/ELEL5	1220–1676	ALL	LT30
4	3	ARNO4/ORHY			
4	3	ARNO4/PSSP6			
4	3	SAVE4			
4	4	ARAR8/STTH2	1220–1523	ALL	LT30
4	4	ARAR8/PSSP6			
4	4	ATCO			

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		HERBACEOUS			
1	1	ELQU2		NOT MAPPED	
1	1	MECI3			
1	1	CASC12			
1	2	FEID		NOT MAPPED	
1	2	ELGL			
1	2	FEOV			
2	1	DECE		NOT MAPPED	
2	1	CAAQ			
2	1	CARO6			
2	1	AGST2			
2	1	POCU3			
2	2	FEID–SYAL		NOT MAPPED	
3	1	CANE2		NOT MAPPED	
3	1	CAMI7			
3	1	CALA30			
3	1	JUBA			
3	1	CASI2			
3	2	PONE3–PULE–ELEL5		NOT MAPPED	
3	4	PSSP6–STCO4		NOT MAPPED	
3	4	PSSP6–BASA3–POSE			
4	1	TYLA		NOT MAPPED	
4	1	ELPA3			
4	3	DISP–(SCNE)		NOT MAPPED	
4	3	LECI4			
4	3	LETR5–POSE			

342B–W NORTHWESTERN BASIN & RANGE SECTION: WESTERN PORTION

FORESTS

TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	VEGETATION–SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	POTR5/CAREX		NOT MAPPED	
1	2	POTR5/SYAL/ELGL	2286–2895	NE	5–59
1	3	ABCO/MARE11	2134–2743	NE,SW	5–59
2	1	POTR15/COSE16		NOT MAPPED	
2	1	ALIN2/CAREX			
2	1	ALIN2–POTR5/COSE16			
2	1	ALIN2/SYAL			
2	1	ALIN2–POTR15/SALIX/CAREX			
2	1	ALIN2–BEOC2/(SALIX)			
2	2	PIPO/ARPA6		NOT MAPPED	
2	3	JUOC/ARTR2/FEID	1372–2743	ALL	LT60
2	3	JUOC/ARAR8/FEID			
2	3	PIMO/ARTR2			
2	3	PIMO/CELE3			
3	1	POTR15/COSE16	2134–2438	NE	30–59
3	1	BEOC2/POTR15/SALIX			
3	2	PIPO–QUKE SERIES		NOT MAPPED	
3	2	QUKE			
3	3	JUOC/CELE3/PSSP6	1372–2590	ALL	LT60
3	3	JUOC/FEID			
3	3	JUOC/ARTR2–PUTR2/PSSP6–FEID			
3	3	PIMO–JUOS/ARTR2			
3	4	PIMO–JUOS/ARAR8	1372–2285	NE,SW	5–59
3	4	JUOC/PSSP6			
3	4	JUOC/ARAR8/PSSP6			
3	4	JUOC/ARTR2/PSSP6			
4	1	POFR2/SAGE2	915–1066	FLAT	FLAT
4	1	POAN3/COSE16			
4	3	PIPO/PUTR2/ORHY	1677–1981	NE	30–59
4	4	JUOC/ARRI2/POSE	1220–2133	NE,SW	5–59
4	4	JUOC/ARAR8/DAUN–POSE			
4	4	JUOS/BARREN			
4	4	JUOS/ARNO4			
4	4	JUOS/ARNO4/ROCK			

342B−W NORTHWESTERN BASIN & RANGE SECTION: WESTERN PORTION

SHRUBLANDS

TEMP COLD−1	MOIS WET−1	PLANT ASSOCIATIONS	VEGETATION−SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	SADR		NOT MAPPED	
1	2	CELE3/SYOR2	2134−2590	ALL	LT60
1	2	ARTRV−CELE3/ELCA−POSE			
1	2	ARTRV/CAGE2			
1	3	ARAR8/FEID	1372−2743	ALL	LT60
1	3	ARTRV/FEID			
1	3	ARTRV/BRCA5			
1	3	CELE3/PSSP6−FEID			
1	3	ARAR8−CELE3/PSSP6−POSE			
1	3	PUTR2/FEID			
1	4	ARTR2/FEID		NOT MAPPED	
1	4	CELE3/ARTR2			
2	1	SABO2−SAGE2		NOT MAPPED	
2	1	SABO2/CARO6			
2	1	SABO2−SALE			
2	1	SAGE2−SARI2			
2	1	SAGE2−SALE			
2	1	SARI2/RIAU			
2	1	SALI SERIES			
2	2	ARTR4/PSSP6	1067−2438	ALL	LT60
2	2	ARTR4/FEID			
2	2	ARTRW8−PUTR2/PSSP6			
2	2	ARTRW8−PERA4/FEID			
2	2	ARTRV/STOC2			
2	2	ARTRV/PSSP6			
2	2	CELE3/PRVI			
2	2	AMAL2/ARTR2/FEID			
2	2	ARPA6/CEVE−CEPR			
2	3	CELE3/PSSP6	915−2285	ALL	LT60
2	3	ARAR8/PSSP6			
2	3	ARAR8/FEID			
2	3	ARTRW8/PSSP6			
2	3	ARTRW8/STCO4			
2	3	ARTRW8/STTH2			
2	3	ARTRT/PSSP6			
2	3	ARRI2/PSSP6			
2	3	ARAR8/POSE			
2	4	SADO4/PSSP6	1220−2133	NE,SW	5−59
2	4	ARTRW8−ATCO			
2	4	ARTR2−EPVI			
3	1	SALA6/BARREN	1677−1981	FLAT	FLAT
3	1	SALA6/ROWO/GRASS−FORB			
3	1	ARCA13/(ELCA11)−PONE3			
3	1	ARCA13/LECI4			
3	2	PUTR2/ORHY	1067−2133	FLAT, NE	LT60
3	2	ARTR2−PUTR2/ORHY−STCO4			
3	2	ARTRT/FEID			
3	2	ARTRT/LECI4			
3	3	ARRI2/POSE	1067−1828	FLAT, SW	LT60
3	3	GRSP−EPVI			

342B–W NORTHWESTERN BASIN & RANGE SECTION: WESTERN PORTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
3	3	GRSP–PRAN2			
3	3	ATCA2			
3	3	ATCA2–ARTR2			
3	3	ATCA2–KRLA2			
3	3	ATCA2/HIJA			
3	3	ARNO4/HIJA			
3	3	ARNO4/PSSP6			
3	3	ARNO4/ELEL5			
3	4	GRSP/ARSP5	1220–1676	ALL	LT60
3	4	GRSP/LYAN			
3	4	GRSP/ORHY			
3	4	GRSP/ARNO4/STSP3			
3	4	ATCA2/ORHY			
3	4	ATCO/HIJA			
3	4	ARNO4			
3	4	ARNO4/ORHY			
3	4	ARNO4/STCO4			
4	1	SAEX	1220–1371	FLAT	FLAT
4	1	SAEX–SALUL			
4	2	SAVE4/LECI4	1067–1676	FLAT	FLAT
4	2	SAVE4/DISP			
4	2	SAVE4/CHNA2			
4	3	ATCA2/SPAI	1067–1676	ALL	LT30
4	3	ALOC2			
4	3	ATCO–SAVE4			
4	3	ATCO/ELEL5			
4	3	ATCO/ARSP5/SAVE4			
4	3	ATCO–KRLA2			
4	3	KRLA2/POSE			
4	3	SAVE4 (DUNE)			
4	3	SAVE4			
4	3	SAVE4/SUNI			
4	4	ATCO (COMM II)	1067–1676	NE,SW	5–59
4	4	ATCO/ARSP5			
4	4	ATCO/ARSP5/KRLA2			
4	4	ATCO/ARSP5/ORHY			
4	4	ATCO–EPNE			
4	4	ATCO/KOAM			
4	4	ATCO–LYSH			
4	4	ATCO/ORHY			
4	4	ATCO/TEGL			
4	4	SAVE4/ATCO/ARSP5			
4	4	SAVE4/ORHY			
4	4	SAVE4/ELEL5			
4	4	PSPOP/ORHY			

342B–W NORTHWESTERN BASIN & RANGE SECTION: WESTERN PORTION

HERBACEOUS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CANI2		NOT MAPPED	
1	1	CASP5			
1	2	FEID	2286–2895	ALL	LT30
1	2	ELGL			
1	2	FEOV			
2	1	DECE		NOT MAPPED	
2	1	POCU3			
2	1	CAPR5–CAAQ			
2	2	FEID–SYAL		NOT MAPPED	
2	2	FEID			
2	3	JUBA–CARO5		NOT MAPPED	
3	1	CANE2	1372–1523	FLAT	FLAT
3	1	DECE–CAREX			
3	1	CAMI7			
3	2	PONE3–PULE–ELEL5		NOT MAPPED	
3	2	PONE3			
3	3	PSSP6–POSE		NOT MAPPED	
3	3	CADO2			
3	4	PSSP6–STCO4		NOT MAPPED	
3	4	PSSP6–BASA3–POSE			
4	1	TYLA		NOT MAPPED	
4	1	ELPA3			
4	1	ELPA3–JUBA			
4	2	ELPA3–DISP		NOT MAPPED	
4	3	DISP–(SCNE)		NOT MAPPED	
4	3	DISP			
4	3	JUBA			
4	3	LECI4			
4	3	LETR5–POSE			
4	3	SUMO			
4	4	ORHY SERIES		NOT MAPPED	

342C OWYHEE UPLANDS SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	ABLA/STAM2		NOT MAPPED	
1	2	ABLA/CLUN2		NOT MAPPED	
1	2	ABLA/VAGL			
1	3	ABLA/CAGE2		NOT MAPPED	
1	3	ABLA/VASC			
2	1	POTR5/SYAL/ELGL		NOT MAPPED	
2	1	POTR5/CAREX			
2	2	ABGR/CLUN2		NOT MAPPED	
2	2	PSME/OSCH			
2	2	PSME/SYAL			
2	2	ABGR/VAGL			
2	3	ABGR/CARU	1829-2438	FLAT,NE	LT60
2	3	ABGR/ACGL			
2	3	ABGR/SPBE2			
2	3	ABGR/VACE			
2	3	PSME/CARU			
2	3	PSME/CAGE2			
2	3	PSME/PHMA5			
2	3	PSME/SPBE2			
3	1	POTR5/SASC	610-761	FLAT	FLAT
3	3	PIPO/SYAL		NOT MAPPED	
3	4	PIPO/SYOR2	1524-1828	NE	5-59
3	4	PIPO/FEID			
3	4	PIPO/PSSP6			
3	4	PIPO/PUTR2			
3	4	PSME/FEID			
3	4	PSME/PSSP6			
3	4	JUOC/ARTRV			
3	4	JUOC/CELE3/PSSP6			
4	1	ALRH2/AMAL2	610-761	FLAT	FLAT
4	1	ALRH2/BEOC2			
4	1	ALRH2/CELAR			
4	1	ALRH2/PHLE4			
4	1	ALRH2/SACE3			
4	1	ALRH2-POTR15			
4	1	POTR5 SERIES			
4	3	JUOC/CELE3-SYOR2	1524-1828	ALL	LT60
4	3	JUOC/CELE3/CAGE2			
4	3	JUOC-PIPO/PUTR2			
4	4	JUOC/PSSP6		NOT MAPPED	
4	4	JUOC/FEID			
4	4	JUOC/ARAR8/PSSP6			
4	4	JUOC/ARTR2/PSSP6			

SHRUBLANDS

TEMP	MOIS		VEGETATION−SITE RULES		
COLD−1	WET−1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CELE3/SYOR2		NOT MAPPED	
1	1	CELE3/CARU			
1	1	ARTRV−CELE3/ELCA−POSE			
1	1	ARTRV/CAGE2			
1	1	ARTRV−SYOR2/FEID			
1	2	PHMA5−SYAL	1220−2438	ALL	LT30
1	2	ARTRV/BRCA5			
1	2	ARTRV/FEID			
1	2	PUTR2/FEID			
1	2	ARPA6/CEVE−CEPR			
1	2	ARTRV/LECI4			
1	3	PUTR2/ORHY	1220−2438	ALL	LT30
1	3	PUTR2/STCO4			
1	3	PUTR2/PSSP6			
1	3	ARTR2/FEID			
1	3	ARAR8/FEID			
2	1	ARCA13/CANE2−POCU3		NOT MAPPED	
2	2	ARTRV/PSSP6	1220−2285	ALL	LT60
2	2	CELE3/PSSP6			
2	2	ARTRW8−PERA4/FEID			
2	2	ARTRT/FEID			
2	3	ARTRW8/PSSP6	610−2133	ALL	LT60
2	3	ARTRW8/STCO4			
2	3	ARTRW8/STTH2			
2	3	ARTRT/PSSP6			
2	3	ARTR2/STCO4			
2	3	ARAR8/PSSP6			
2	4	ARNO4/POSE		NOT MAPPED	
2	4	ARNO4/PSSP6			
3	1	ARCA13/(ELCA11)−PONE3		NOT MAPPED	
3	2	GLNE3/PSSP6		NOT MAPPED	
3	2	ARTRT/FEID			
3	2	ARTRT/LECI4			
3	2	CELAR/PSSP6			
3	3	ARAR8/POSE	762−1828	ALL	LT30
3	3	ARRI2/POSE			
3	3	ERSP7−POSE			
3	3	ERTH4−POSE			
3	4	ATCO−ARSP5−SAVE4	915−1066	ALL	LT30
4	1	ARCA13/LECI4		NOT MAPPED	
4	1	ARCA13/MURI			
4	3	ATCO−SAVE4	610−1828	FLAT,NE	LT30
4	3	SAVE4/DISP			
4	3	SAVE4/LECI4			
4	3	SAVE4/SUNI			
4	4	ATCO/ORHY	610−1981	ALL	LT30
4	4	ATCO/PSSP6			
4	4	KRLA2/POSE			
4	4	ATCO/ELEL5			

HERBACEOUS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
2	1	CAAQ		NOT MAPPED	
2	1	CARO6			
2	2	FEID–KOMA		NOT MAPPED	
2	3	PSSP6–FEID (CANYON)		NOT MAPPED	
3	1	CANE2		NOT MAPPED	
3	2	LECI4 (BOTTOMLANDS)		NOT MAPPED	
3	3	PSSP6–BASA3–POSE		NOT MAPPED	
4	2	DISP–(SCNE)		NOT MAPPED	
4	2	JUBA			
4	3	PSSP6–OPPO–(POSE)	762–914	SW	5–59

342D SNAKE RIVER BASALTS SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	2	PIFL2/PUTR2		NOT MAPPED	
1	2	JUOS/PUTR2-SYOR2/PSSP6			
2	1	POAN3/COSE16		NOT MAPPED	
2	3	JUOS/ARTR2		NOT MAPPED	
3	2	JUOS/PSSP6		NOT MAPPED	
		SHRUBLANDS			
1	1	ALIN2/RIHU		NOT MAPPED	
1	2	ARTRV/FEID	1372-2438	ALL	LT60
1	2	ARTRV/PSSP6			
1	2	ACGR3/CARU			
2	1	PEFL15/DECE		NOT MAPPED	
2	1	ALIN2/COSE16			
2	1	SAGE2/CARO6			
2	1	SAGE2/MESIC FORB			
2	1	SAGE2/DECE			
2	1	SAGE2/MESIC GRAMINOID			
2	2	PUTR2/(PSSP6)-FEID	1524-2285	ALL	LT30
2	3	PUTR2/CHNA2	762-1523	FLAT,SW	LT30
2	3	CHNA2/LEFL4-PSLA3			
2	4	ARARL/FEID		NOT MAPPED	
3	1	SABO2/CARO6		NOT MAPPED	
3	1	SABO2/MAST4			
3	1	SABO2/CAAQ			
3	2	ARTR2/FEID	1829-2285	ALL	LT30
3	2	ARTR2/PSSP6			
3	2	ARTR2/STCO4			
3	2	ARCA13/MURI			
3	2	PUTR2/PRVI			
3	3	ARTR2/STCO4	762-2133	ALL	LT60
3	3	ARTRT/PSSP6			
3	3	ARTRW8/STTH2			
3	3	ARTRW8/PSSP6			
3	3	ARTRW8/STCO4			
3	4	ARAR8/POSE		NOT MAPPED	
3	4	ARAR8/PSSP6			
4	1	SAEX		NOT MAPPED	
4	4	ATCO/ORHY	1372-1828	ALL	LT30
4	4	ATCO/PSSP6			
4	4	KRLA2/POSE			
4	4	EROV			
4	4	ARNO4/POSE			

342D SNAKE RIVER BASALTS SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		HERBACEOUS			
2	1	CARO6	NOT MAPPED		
2	1	CAAQ			
2	1	CASI2			
2	3	LEFL4	NOT MAPPED		
3	1	CANE2	NOT MAPPED		
3	1	ELPA3			
3	1	JUBA			
3	1	SCAC			
3	2	PASM	NOT MAPPED		

342H HIGH LAVA PLAINS SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	POTR5/SYAL/ELGL		NOT MAPPED	
1	1	ALIN2-POTR5/COSE16			
1	1	SAGE2-SARI2			
1	1	SAGE2-SALE			
1	1	ALIN2/COSE16			
1	1	SABO2/CARO6			
1	1	ALIN2-BEOC2/(SALIX)			
1	1	SABO2-SAGE2			
1	2	PIPO/CARU		NOT MAPPED	
1	2	PIPO/CAGE2			
1	2	ABGR/CARU			
1	2	PSME/SYAL			
1	2	PIPO-PSME/PUTR2			
1	2	PSME/VAGL			
1	3	JUOC-PIPO/PUTR2/(PSSP6)-FEID	1524-1981	ALL	LT60
2	1	SARI2/RIAU	458-1523	FLAT	FLAT
2	1	POTR15/CIDO			
2	1	BEOC2/CRDO2			
2	1	BEOC2-POTR15/SALIX			
2	3	JUOC/ARTR2-PUTR2/PSSP6-FEID	1220-1523	ALL	LT30
3	1	PRVI-SALIX/ROWO		NOT MAPPED	
3	1	SAAM2-SAFL14-SALUL/CAREX			
3	1	SAAM2-SAEX-SALUL			
3	1	CRDO2/SYAL			
3	1	CRDO2/ROWO			
3	1	POTR15/COSE16			
3	3	JUOC/POSE-STOC2	915-1523	FLAT,NE	LT30
3	4	JUOC/ARAR8/FEID	610-1676	ALL	LT30
3	4	JUOC/ARTR2/FEID			
3	4	JUOC/FEID			
4	1	POTR15/SAEX		NOT MAPPED	
4	3	JUOC/ARTR2/CAFI	1220-1676	ALL	LT30
4	4	JUOC/ARRI2/POSE	610-1219	ALL	LT30
4	4	JUOC/ARTR2/PSSP6			
4	4	JUOC/ARAR8/PSSP6			
4	4	JUOC/PSSP6			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	CELE3/PSSP6-FEID	915-1523	NE	5-59
1	1	PUTR2/(PSSP6)-FEID			
2	2	ARTR2/FEID	458-1523	ALL	LT60
2	2	ARAR8/FEID			
3	2	CELE3/PSSP6	610-1523	ALL	LT60
3	2	ARTRV/STOC2			
3	2	CELAR/PSSP6			
3	2	ARTRW8-PUTR2/PSSP6			
3	2	ARRI2/PSSP6			
3	3	ARTRW8/STTH2	458-1523	ALL	LT60
3	3	ARTRW8/PSSP6			
3	3	ARAR8/PSSP6			

TEMP COLD–1	MOIS WET–1	PLANT ASSOCIATIONS	VEGETATION–SITE RULES		
			ELEVATION (m)	ASPECT	SLOPE
3	4	ERDO–POSE		NOT MAPPED	
3	4	ERSP7–POSE			
4	1	SAVE4/DISP		NOT MAPPED	
4	1	ARCA13/LECI4			
4	1	SAEX			
4	1	SAEX–SALUL			
4	2	ARTR2/LECI4	1220–1371	FLAT	FLAT
4	3	ARAR8/POSE	305–1371	ALL	LT60
4	3	ARRI2/POSE			
4	3	ARTRW8/STCO4			
4	4	SADO4/PSSP6		NOT MAPPED	
		HERBACEOUS			
1	1	CANE2		NOT MAPPED	
2	2	PSSP6–FEID (CANYON)	305–761	ALL	LT60
3	3	PSSP6–BASA3–POSE	458–761	SW	5–59
3	3	PSSP6–POSE (LITHOSOL)			
3	3	PSSP6–ERHE2			
3	4	LOCO4–POSE	458–609	NE	5–29
3	4	(BASE2)–POSE			
4	1	LECI4 (BOTTOMLANDS)	458–914	FLAT	FLAT
4	1	DISP–(SCNE)			
4	3	PSSP6–OPPO–(POSE)		NOT MAPPED	

342I COLUMBIA BASIN SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	POTR5/SYAL		NOT MAPPED	
1	1	PIPO-PSME			
1	1	ALIN2			
2	2	PSME/SYAL	762-1676	ALL	LT30
2	2	PSME/PHMA5			
2	2	PSME/CARU			
2	3	PIPO-PSME/PSSP6	1220-1371	NE	5-29
3	1	ALRH2		NOT MAPPED	
4	1	POTR15/COSE16	305-761	ALL	LT60
4	4	PIPO/FEID	762-1523	ALL	LT30
4	4	PIPO/PSSP6			
4	4	PIPO/PUTR2			
4	4	JUOC SERIES			
4	4	QUGA4 SERIES			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
2	1	CRDO2/ROWO		NOT MAPPED	
2	2	PUTR2/FEID	305-1523	ALL	LT60
2	2	ARTR4/FEID			
2	2	SYAL-RONU			
2	3	PUTR2/PSSP6	153-1219	ALL	LT60
2	3	ARTR4/PSSP6			
2	4	PUTR2/STCO4	0-1066	FLAT,SW	LT30
2	4	ARTR4/STCO4			
3	1	SAEX	458-609	FLAT	FLAT
3	2	ARTR2/FEID	153-1066	ALL	LT30
3	3	ARTR2/PSSP6	0-1066	ALL	LT60
3	3	ARRI2/PSSP6			
3	3	RHGL/PSSP6			
3	4	ARTR2/STCO4	0-1219	ALL	LT60
3	4	PUTR2/ORHY			
4	3	SAVE4/DISP	153-914	ALL	LT60
4	3	ARTRT/FEID			
4	3	ARTRT/PSSP6			
4	4	KRLA2/POSE	0-1371	ALL	LT60
4	4	GRSP/POSE			
4	4	ARTR2/POSE			
4	4	ARRI2/POSE			
4	4	ERSP7-POSE			

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
		HERBACEOUS			
1	1	FEID-KOMA	153-1371	ALL	LT60
1	1	FEID-SYAL			
1	1	RONU/FEID			
2	2	PSSP6-FEID (PALOUSE)	0-1219	ALL	LT60
3	2	PSSP6-FEID (CANYON)	0-1219	ALL	LT60
3	3	PSSP6-POSE (LITHOSOL)	0-1219	ALL	LT60
4	2	LECI4 (BOTTOMLANDS)		NOT MAPPED	
4	3	DISP-(SCNE)	0-304	FLAT,SW	LT30
4	4	LOCO4-POSE	0-1219	FLAT	FLAT
4	4	STCO4-POSE			
4	4	DAUN-POSE			
4	4	ARLO3-POSE			

M242C EASTERN CASCADES SECTION

FORESTS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/LEGL	1829–2133	ALL	LT30
1	1	ABLA/RHAL2			
1	2	ABLA/PHEM	1220–2133	ALL	LT60
1	2	LALY/VADE			
1	2	TSME/PHEM–VADE			
1	3	TSME/XETE	1220–2743	ALL	ALL
1	3	TSME/VASC			
1	3	TSHE/ARNE			
1	3	TSME/LUHI			
1	3	ABLA/LUHI			
1	3	ABLA/VAMY2			
1	3	ABLA/VASC			
1	3	PICO/VASC			
1	3	PICO/XETE			
1	4	PIAL/CARU	1220–2133	SW	5–59
1	4	PIAL/LUGLH			
1	4	LALY/LUGLH			
1	4	PIAL–PICO/PELA7			
1	4	PICO/CAPE6			
2	1	ABLA/MEFE	458–1523	ALL	LT60
2	1	ABLA/TRCA3			
2	1	PIEN/EQAR			
2	1	ABAM/OPHO			
2	1	ABGR/POPU3			
2	1	TSHE/OPHO			
2	1	THPL/OPHO			
2	2	ABAM/CLUN2	610–1981	ALL	LT60
2	2	PIEN/CLUN2			
2	2	ABLA/LIBO3			
2	2	ABAM/ACCI			
2	2	ABAM/ACTR			
2	2	ABAM/VAAL			
2	2	ABAM/GASH			
2	2	ABGR–PIEN/MAST4			
2	2	ABGR/VAME/CLUN2			
2	2	ABGR/VAME			
2	2	THPL/ACTR			
2	2	TSHE/ACTR			
2	2	TSHE/RHMA3			
2	2	ABCO–PIPO/CAPE6			
2	3	ABAM/XETE	915–1828	ALL	ALL
2	3	TSME/RULA2			
2	3	ABAM/VAME			
2	3	ABCO–ABSH/CHUM			
2	3	ABSH/CAPE6			
2	3	ABSH–TSME/ARNE			
2	3	TSHE/ARNE			
2	3	TSHE/XETE			
2	3	ABCO/CEVE			
2	3	ABCO–PIPO/RIVI3			

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
2	3	ABCO-PILA-PIPO/ARPA6			
2	3	ABCO-PICO/CAPE6-STOC2			
2	3	PICO/CAPE6			
2	3	PSME/ARUV			
2	4	ABLA/CARU	762-2133	ALL	ALL
2	4	ABLA/CAGE2			
2	4	ABGR/CAGE2			
2	4	PIPO-PSME/ARNE			
2	4	ABGR/ARNE			
2	4	PSME/HODI			
2	4	PSME/SPBE2			
2	4	PICO/STOC2			
2	4	PICO/CAGE2			
2	4	PICO/CEVE			
2	4	PSME/ARUV-PUTR2			
2	4	PICO/ARTR2			
2	4	PICO/ARTR2/FEID			
2	4	PICO/ARTR2/STOC2			
2	4	PICO/FEID			
2	4	PICO/PUTR2/STOC2			
2	4	PICO/PUTR2/CAPE6			
2	4	PICO/PUTR2-RICE			
3	1	PICO/CAREX WETLAND	1372-2438	ALL	LT30
3	1	PICO-POTR5/VAUL			
3	1	TSHE/LIBO3			
3	2	ABGR/CACH6	153-2133	ALL	ALL
3	2	ABGR/ACTR			
3	2	ABGR/CLUN2			
3	2	ABGR/ACCI			
3	2	ABGR/LIBO3			
3	2	ABGR/PAMY			
3	2	TSHE/MANEN			
3	2	ABGR/MANEN			
3	2	PICO/PUTR2			
3	2	PICO/ARUV			
3	2	ABCO/CACH6			
3	3	ABGR/TRLA6	305-2133	ALL	ALL
3	3	ABGR/SYAL			
3	3	ABGR/CARU			
3	3	ABGR/SPBE2			
3	3	PSME/SYAL			
3	3	PSME/CAGE2			
3	3	PSME/CARU			
3	3	ABCO-PIPO/ARPA6-MANEN			
3	3	PICO/FEID			
3	3	ABCO/CEVE			
3	3	ABCO/SYAL			
3	4	ABGR/HODI	305-1828	ALL	ALL
3	4	PSME/FEOC			
3	4	PIPO-PSME/PUTR2			
3	4	PIPO-PSME/ARPA6-CEVE			

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
3	4	PIPO–PSME/PEFR3			
3	4	PIPO/ARPA6			
3	4	PIPO/ASDE6			
3	4	ABCO–CADE27–PIPO/AMAL2			
3	4	ABCO/ARPA6			
4	2	PIPO/PUTR2–FEID	153–1676	ALL	LT60
4	2	PIPO/ARPA6–PUTR2			
4	2	PIPO–QUGA4/SYAL			
4	2	QUGA4/ELGL			
4	2	PIPO/CEVE–PUTR2			
4	2	PIPO/PUTR2/CAPE6			
4	2	PIPO/ARTRV/PONE2			
4	3	PIPO–QUGA4/PUTR2	153–1371	ALL	ALL
4	3	PIPO–QUGA4/BASA3			
4	3	PIPO–QUGA4/CAGE2			
4	3	QUGA4/CAGE2			
4	3	QUGA4/SYAL			
4	3	QUGA4/FEID			
4	3	PIPO/PUTR2/STOC2			
4	3	PIPO/WYMO			
4	4	JUOC/ARTR2–PUTR2/PSSP6–FEID	458–1828	ALL	LT30

SHRUBLANDS

1	2	ALVIS	1829–2285	ALL	LT60
1	2	CAME7–PHEM			
1	3	PUTR2/CAPE6–STOC2	1982–2133	NE	5–29
1	4	ARTRV/CAGE2	1982–2590	NE,SW	GT5
1	4	ARTRV/STOC2			
2	1	SABO2–SAGE2/CAAN15		NOT MAPPED	
2	1	SABO2/CARO6			
2	1	SABO2–SAGE2			
2	1	SABO2–SALE			
2	1	SAGE2–SALE			
2	1	VAOC/CAAQD			
2	3	PUTR2/FEID	762–914	FLAT	FLAT
2	3	ARTR4/FEID			
2	4	ARTRV/FEID	0–914	SW	5–59
3	3	CELE3/PSSP6–FEID	153–1676	ALL	LT60
3	3	ARTR2/FEID			
3	3	ARAR8/FEID			
3	4	ARTRV/PSSP6	610–914	SW	GT30
4	2	ARCA13/(ELCA11)–PONE3		NOT MAPPED	
4	2	ARCA13–ARTRV/POCU3			
4	3	ARTRW8–PUTR2/PSSP6	0–914	ALL	LT60
4	3	ARAR8–PUTR2/PSSP6–FEID			
4	4	ARTRW8/PSSP6	1220–1371	ALL	LT30
4	4	ARTRW8/STTH2			
4	4	ARAR8/PSSP6			
4	4	ARAR8/POSE			

HERBACEOUS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CANI2	1372–2590	ALL	LT60
1	1	CASC10–GERO2			
1	2	CASP5		NOT MAPPED	
1	3	CABR12	1982–2438	SW	5–59
1	3	FEVI			
1	3	FEOV			
1	4	CAPU	2134–2285	FLAT	FLAT
1	4	DAIN			
2	1	CASI2	1524–1676	FLAT	FLAT
2	1	CALE4			
2	1	CALA11			
2	1	CARO6			
2	2	DECE		NOT MAPPED	
2	3	POCU3	1220–1371	FLAT	FLAT
2	3	PONE3			
3	1	CANE2		NOT MAPPED	
3	3	FEID–HICY		NOT MAPPED	
4	1	SCAC	1220–1523	FLAT	FLAT
4	1	TYLA			
4	3	PSSP6–FEID (PALOUSE)		NOT MAPPED	
4	4	PSSP6–POSE		NOT MAPPED	
4	4	PSSP6–BASA3–POSE			
		ROCKS	2286–3047	ALL	LT60

M261D SOUTHERN CASCADES SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	2	TSME/PHEM-VADE	1524-2743	FLAT, NE	LT60
1	2	TSME/JUPA			
1	2	TSME/VASC			
1	2	ABSH/VAME			
1	2	ABSH/CAPE6			
1	2	ABSH/PENST			
1	3	ABCO-ABSH/CHUM	1677-2438	ALL	LT60
1	3	ABSH-TSME/ARNE			
1	4	PIAL SERIES	2286-2743	SW	5-59
1	4	PICO/ARNE			
2	1	TSHE/VAME/LIBO3	1372-2133	ALL	LT30
2	1	ABAM-ABCO/MANEN			
2	2	ABCO/RUNI2	915-2285	ALL	LT60
2	2	ABCO/VAME			
2	2	ABCO/ACGL			
2	2	ABCO/AMAL2-COCO6			
2	2	ABCO/AMAL2/ANDE3			
2	3	ABCO/CHUM	915-2438	ALL	LT30
2	3	ABCO/CACH6			
2	3	ABCO/CEVE			
2	3	ABCO-PSME/MAPI3			
2	3	ABCO-PIPO/CEVE			
3	1	PIPO/AMAL2-MARE11	762-1523	NE	5-59
3	1	ABCO/MANEN			
3	2	PIPO-PIJE/MARE11	610-1981	ALL	LT60
3	2	PIPO-PSME/PUTR2			
3	2	ABCO-PILA-PIPO/ARPA6			
3	2	ABCO-CADE27-PIPO/AMAL2			
3	2	CADE27-PSME/CACH6			
3	2	PILA-PSME/CACH6			
3	2	PIJE-QUKE/POSE			
3	2	PIJE-QUKE/RHTR			
3	3	PIPO-PIJE/STCOL	1067-1981	ALL	LT60
3	3	PIPO/ARPA6-PUTR2			
3	3	PIPO/ARPA6			
3	4	CUBA		NOT MAPPED	
4	1	TSHE/MANEN		NOT MAPPED	
4	2	PIPO-QUKE	305-1371	ALL	LT60
4	2	PIPO-QUWI			
4	2	JUOC-PIPO-QUGA4/CECU/FEID			
4	2	QUGA4/CECU/FEID			
4	2	QUGA4/TODI-SYAL/ELGL			
4	3	PIPO/STCO4	305-1523	ALL	LT30
4	3	PIPO/PUTR2			
4	3	PIPO-QUGA4/PUTR2			
4	3	PIAT SERIES			
4	4	JUOC/ARTRV	458-1523	ALL	LT60
4	4	JUOC/ARAR8/PSSP6			
4	4	JUOC-QUGA4			
4	4	QUDO			

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		SHRUBLANDS and HERBACEOUS			
1	1	ALIN2		NOT MAPPED	
1	3	HODI		NOT MAPPED	
2	1	DECE		NOT MAPPED	
2	1	CANE2			
2	1	CARO6			
2	2	CEVE		NOT MAPPED	
2	3	CELE3/FEID		NOT MAPPED	
3	1	SALE	610–914	FLAT	FLAT
3	2	QUVA		NOT MAPPED	
3	2	ARPA6 SERIES			
3	3	QUBR		NOT MAPPED	
3	4	ARTR2 SERIES	762–914	FLAT,SW	LT30
3	4	PSSP6			
4	1	VERNAL POOLS– ANNUALS & FORBS		NOT MAPPED	
4	3	ARVI4–CECU/FEID–STLE2	305–1066	ALL	LT60
4	3	CECU SERIES			
4	3	DACA3			
4	3	STLE2			
4	4	NAPU	762–914	SW	5–29
		ROCKS	2439–4114	NE,SW	5–59

M261G MODOC PLATEAU SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	PICO/VACE	2439-2590	NE	30-59
1	1	PICO/ARTR2/FEID			
1	1	PICO/ARTR2/STOC2			
1	2	ABSH/CAPE6	2134-2285	FLAT,NE	LT30
1	2	PICO SERIES			
1	2	ABCO/CACH6			
1	2	ABCO/CEVE			
1	3	ABSH-TSME/ARNE	2134-2895	SW	5-29
1	3	ABSH/CACH6			
1	3	ABSH/PENST			
1	3	PIWA/SYLO/PSJA			
1	3	PIWA/ARNE			
1	4	PIAL/STCA	2744-2895	NE,SW	5-29
1	4	PIAL/PEGR2			
1	4	PIAL/ARAC			
2	1	POTR15 SERIES	1982-2285	FLAT	FLAT
2	2	ABCO/SYAL	1677-2285	ALL	LT60
2	2	ABCO/SYMO			
2	2	ABCO/MARE11			
2	2	ABCO-PIPO/SYMPH			
2	3	PIJE/PUTR2	1677-2285	ALL	LT60
2	3	PIJE/ARTRV			
3	1	ABCO-CADE27-PIPO/AMAL2		NOT MAPPED	
3	2	PIPO-PIJE/FRRU	1372-2133	ALL	LT30
3	2	PIPO-PIJE/MARE11			
3	2	ABCO-PIPO/CEVE			
3	2	ABCO-PIPO/PUTR2			
3	3	PIPO-PIJE/PUTR2	1220-1981	ALL	LT60
3	3	PIPO-PIJE-CADE27			
3	3	PIPO-PIJE/STCOL			
3	3	PIPO/CEVE-PUTR2			
3	3	PIPO/ARPA6-PUTR2			
3	3	PIPO/PUTR2/ORHY			
3	3	PIPO/CELE3-PUTR2			
4	3	PIPO/ARTR2/STIPA	915-1828	ALL	LT60
4	3	PIPO-QUGA4			
4	3	PIPO/PUTR2			
4	3	PIPO/CELE3/PSSP6			
4	3	PIPO/ARTR2-PUTR2			
4	3	JUOC-PIPO/PUTR2/(PSSP6)-FEID			
4	4	JUOC-PIPO-QUGA4/CECU/FEID	915-1828	ALL	LT60
4	4	JUOC/ARNO4			
4	4	JUOC/ARAR8/PSSP6			
4	4	JUOC/ARTRV			
		SHRUBLANDS			
1	1	BEGL-SALIX		NOT MAPPED	
1	2	CELE3/FEID	2286-2438	SW	30-59
1	2	ARTRV/FEID			

M261G MODOC PLATEAU SECTION

TEMP	MOIS		VEGETATION−SITE RULES		
COLD−1	WET−1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	4	ERDI	2286−2743	ALL	LT30
1	4	LEPU			
2	1	SABO2−SALE		NOT MAPPED	
2	1	SAGE2−SARI2			
2	2	CELE3/PSSP6	1372−1981	SW	30−59
2	2	ARPA6/CEVE−CEPR			
2	2	CEVE			
2	3	ARAR8/FEID		NOT MAPPED	
2	3	ARTR2/FEID			
2	4	ARNO4/POSE		NOT MAPPED	
2	4	ARAR8/POSE			
3	1	SALE/LECI4		NOT MAPPED	
3	2	ARCA13/CANE2−POCU3		NOT MAPPED	
3	2	ARCA13/MURI			
3	2	ARCA13/FEID			
3	3	PUTR2/FEID	1220−1828	FLAT,SW	LT60
3	3	PRSU			
3	4	CECU−CEMOG−PRSU	1220−1371	SW	5−59
3	4	ARAR8/PSSP6			
3	4	ARTRW8/PSSP6			
3	4	ARTRW8/STTH2			
4	1	SAEX	915−1219	FLAT	FLAT
4	2	SAVE4/DISP	1372 − 5500	FLAT	FLAT
4	2	SAVE4/LECI4			
4	2	ARTR2/LECI4			
4	3	CECU/PSSP6		NOT MAPPED	
4	4	ATCO−SAVE4	1372−1523	SW	5−29
		HERBACEOUS			
1	1	CASP5	2591−2743	NE	5−29
1	1	CANI2			
2	1	CABR12		NOT MAPPED	
2	1	CALA30			
2	1	CALA11			
2	1	CASI2			
2	1	CAAQ			
2	1	DECE			
2	1	CANE2			
2	2	PONE3		NOT MAPPED	
3	2	POCU3		NOT MAPPED	
3	2	LETR5−POSE			
3	3	FEID		NOT MAPPED	
3	4	PSSP6		NOT MAPPED	
4	1	SCAC	1067−1523	FLAT	FLAT
4	1	SCVA			
4	1	TYLA			
4	2	LECI4		NOT MAPPED	
4	2	DISP			
4	3	STTH2	1372−1523	SW	30−59
4	4	POSE		NOT MAPPED	

M331A YELLOWSTONE HIGHLANDS SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	PIEN/CADI6		NOT MAPPED	
1	1	ABLA/CACA4			
1	1	PIEN/CALE4			
1	2	ABLA/LUGLH		NOT MAPPED	
1	2	PIEN/GATR3			
1	3	ABLA-PIAL/VASC	1677-3352	ALL	LT60
1	3	PIEN/VASC			
1	3	ABLA/VASC			
1	4	PIEN/ARCO9	2286-3352	ALL	LT60
1	4	PIEN/HYRE70			
1	4	PIAL/VASC			
1	4	PIAL/CARO5			
1	4	PIAL/JUCO6			
1	4	PIAL/CAGE2			
2	1	PIEN/COSE16		NOT MAPPED	
2	1	PIEN/EQAR			
2	1	POTR5/CACA4			
2	2	ABLA/THOC	1524-2438	FLAT,NE	LT60
2	2	PIEN/LIBO3			
2	2	PICEA/LIBO3			
2	2	ABLA/ACRU2			
2	2	ABLA/LIBO3			
2	3	ABLA/VAGL	1982-2895	ALL	LT60
2	3	ABLA/SYAL			
2	3	ABLA/CARU			
2	3	PSME/VAGL			
2	4	ABLA/ARCO9	1982-2895	ALL	LT60
2	4	ABLA/JUCO6			
2	4	ABLA/CARO5			
2	4	PICO/PUTR2			
3	1	POTR5/COSE16	2286-2438	FLAT	FLAT
3	1	POTR15/COSE16			
3	2	PSME/OSCH		NOT MAPPED	
3	2	ABLA/SPBE2			
3	2	ABLA/ACGL			
3	3	PSME/SYAL	1372-2438	ALL	ALL
3	3	PSME/CARU			
3	4	PSME/JUCO6	1677-2743	ALL	LT60
3	4	PSME/ARCO9			
3	4	PSME/FEKI2			
3	4	PIEN/JUCO6			
4	2	PSME/SPBE2		NOT MAPPED	
4	2	PSME/ACGL			
4	3	PSME/PHMA5	1677-2590	FLAT,NE	LT60
4	3	PIEN/PHMA5			
4	3	PICEA/PHMA5			
4	3	ACGR3/CARU			
4	4	PIFL2/JUCO6	1524-2438	NE,SW	5-59
4	4	PIFL2/FEID			
4	4	PIFL2/FEKI2			

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
4	4	PSME/PSSP6			
4	4	PSME/FEID			
		SHRUBLANDS			
1	1	SAWO/CAAQ		NOT MAPPED	
1	1	SAWO/DECE			
1	1	SAPL2/CAAQ-CARO6			
1	1	SARE2/CALE4			
1	1	BEGL/CARO6			
1	1	KAMI/CASC12			
1	4	ARART/FEID		NOT MAPPED	
2	1	SAGE2/CACA4		NOT MAPPED	
2	1	SAGE2/CARO6			
2	1	SACA4/CARO6			
2	2	ARTRV-SYOR2/FEID		NOT MAPPED	
2	2	ARCA13/PASM			
2	2	ARCA13/FEID			
2	2	PEFL15/DECE			
2	3	ARTRV/FEID	1524-2438	ALL	LT60
2	3	ARTRV/BRCA5			
2	3	ARTR4/FEID			
2	4	ARTRV/PSSP6	2134-2743	SW	5-59
2	4	ARTR4/PSSP6			
3	1	SADR		NOT MAPPED	
3	1	SABE2			
3	1	COSE16			
3	2	ARTRT/PASM	1677-1828	FLAT	FLAT
3	3	ARTRT/PSSP6	1372-2438	ALL	LT60
3	3	ARTRT/FEID			
3	3	ARPE6/FEID			
3	3	CELE3/PSSP6			
4	4	ARNO4/PSSP6	1220-1676	ALL	LT60
		HERBACEOUS			
1	1	CASC12		NOT MAPPED	
1	1	CACA4			
1	2	MOIST ALPINE TURF	2744-3352	ALL	LT60
1	3	DRY ALPINE TURF	2744-3809	ALL	LT60
2	1	CARO6		NOT MAPPED	
2	1	CAAQ			
2	1	CALI7			
2	1	CALA11			
2	1	ELQU2			
2	1	GLBO			
2	2	DECE		NOT MAPPED	
2	2	SETR			
2	2	FEID-DECE			
2	3	FEID-ELTR7	2744-2895	FLAT	FLAT
2	3	FEID-CAFI			

M331A YELLOWSTONE HIGHLANDS SECTION

TEMP COLD−1	MOIS WET−1	PLANT ASSOCIATIONS	VEGETATION−SITE RULES ELEVATION (m)	ASPECT	SLOPE
3	1	CASI2		NOT MAPPED	
3	1	CANE2			
3	1	ELPA3			
3	1	SCAC			
3	2	FEID−STRI2		NOT MAPPED	
3	3	FEID−PSSP6	1372−2438	ALL	LT60
3	4	PSSP6		NOT MAPPED	
4	1	TYLA		NOT MAPPED	
4	3	PSSP6−PASM	1677−1828	SW	5−29
4	4	STCO4−BOGR2	1220−1676	ALL	LT60
4	4	PSSP6−BOGR2			
4	4	PSSP6−POSE			
		ROCKS	1829−3657	ALL	ALL

M331D OVERTHRUST MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	PIEN/CALE4		NOT MAPPED	
1	1	PIEN/CADI6			
1	1	PIEN/CACA4			
1	1	ABLA/CACA4			
1	2	PIEN/GATR3	2439-2895	ALL	LT60
1	2	ABLA/VASC			
1	2	PIEN/LIBO3			
1	2	ABLA/ARLA8			
1	3	PIEN/VASC	2896-3809	ALL	ALL
1	3	PIAL/VASC			
1	3	PIAL/CAGE2			
1	3	PIAL/JUCO6			
1	3	PIAL/CARO5			
1	4	PICO/ARCO9	2286-3352	NE,SW	GT5
1	4	PIEN/RIMO2			
1	4	PIEN/JUCO6			
2	1	PIEN/COSE16	1982-2590	NE,SW	5-59
2	1	PIEN/EQAR			
2	1	POTR15/COSE16			
2	2	ABLA/ACRU2	1677-2895	ALL	LT60
2	2	ABLA/LIBO3			
2	2	ABLA/THOC			
2	2	ABLA/OSCH			
2	2	POTR5/SYOR2/CARU			
2	2	POTR5/SYOR2/TALL FORB			
2	2	POTR5/SYOR2/THFE			
2	2	POTR5/SYOR2/CARO5			
2	2	POTR5/SYOR2/BRCA5			
2	2	POTR5/AMAL2-SYOR2/BRCA5			
2	2	POTR5/AMAL2-SYOR2/THFE			
2	2	POTR5/AMAL2-SYOR2/CARU			
2	2	POTR5/AMAL2-SYOR2/TALL FORB			
2	2	POTR5/RUPA			
2	2	ABLA/RIMO2			
2	3	ABLA/PHMA5	1829-3200	ALL	ALL
2	3	ABLA/VAGL			
2	3	ABLA/SYAL			
2	3	ABLA/CARU			
2	3	ABLA/PERA4			
2	3	PICO/VASC			
2	3	PICO/SPBE2			
2	3	PICO/VAGL			
2	3	PICO/CARU			
2	4	ABLA/ARCO9		NOT MAPPED	
2	4	ABLA/CARO5			
2	4	POTR5/SASC			
3	1	POAN3/COSE16	1524-1676	FLAT	FLAT
3	2	PSME/ARCO9	1982-3200	ALL	LT60
3	2	PSME/SYOR2			
3	2	PSME/OSCH			

M331D OVERTHRUST MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
3	2	ABLA/ACGL			
3	2	ABLA/SPBE2			
3	2	POAN3/ACGR3			
3	2	POTR5/THFE			
3	2	POTR5/SHCA			
3	3	PSME/CARU	1829-2743	ALL	LT60
3	3	PSME/SYAL			
3	3	PSME/VAGL			
3	3	POTR5/AMAL2/TALL FORB			
3	3	POTR5/AMAL2/THFE			
3	3	POTR5/CARU			
3	3	POTR5/BRCA5			
3	4	PSME/JUCO6	1677-2895	ALL	LT60
3	4	ABLA/MARE11			
3	4	ABLA/JUCO6			
3	4	POTR5/WYAM			
3	4	POTR5/TALL FORB			
3	4	PSME/FEKI2			
3	4	PIFL2/FEKI2			
3	4	PIFL2/FEID			
3	4	PIFL2/CELE3			
4	2	PSME/SPBE2	1524-2285	ALL	LT60
4	2	PSME/ACGL			
4	3	PSME/PHMA5	1982-2285	FLAT,SW	LT60
4	3	POTR5/JUCO6/CAGE2			
4	3	POTR5/JUCO6/LUAR3			
4	4	PSME/CELE3	1524-2438	ALL	LT60
4	4	PSME/MARE11			
4	4	POTR5/ARTR			
4	4	POTR5/STCO4			
4	4	JUOS/PSSP6			
4	4	PSME/FEID			

SHRUBLANDS

1	1	SAWO/CAAQ	2439-2590	FLAT	FLAT
1	1	SAWO/CARO6			
1	1	SAWO/CANE2			
1	1	SAWO/DECE			
1	1	SAWO/MESIC FORB			
1	1	SAPL2			
1	3	ARTRV-SYOR2/PSSP6	1677-3047	FLAT,NE	LT60
1	3	ARTRV-SYOR2/FEID			
2	1	SAEA	1677-2743	ALL	LT30
2	1	SAGE2/POPA2			
2	1	SAGE2/CARO6			
2	1	SAGE2/CACA4			
2	1	SAGE2/MESIC FORB			
2	1	SAGE2/DECE			
2	1	SAGE2/MESIC GRAMINOIDINOID			
2	1	ARCAV2/DECE			

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
2	2	PEFL15/DECE	2286-2438	SW	5-59
2	2	PEFL15/FEID			
2	2	ARCAV2/FEID			
2	3	ARTRV/FEID	1829-2895	ALL	LT60
2	3	ARTRV/BRCA5			
2	3	ACGL			
2	4	PUTR2/PSSP6	1524-2590	ALL	LT60
2	4	ARTRV/PSSP6			
3	1	SABO2/CARO6	1677-2438	FLAT	FLAT
3	1	SABO2/CANE2			
3	1	SABO2/CACA4			
3	1	SABO2/EQAR			
3	1	SABO2/POPA2			
3	1	SABO2/MAST4			
3	1	SABO2/CAAQ			
3	1	SABO2/MESIC FORB			
3	1	SABO2/MESIC GRAMINOID			
3	1	COSE16/GATR3			
3	1	ALIN2/RIHU			
3	1	ALIN2/MESIC FORB			
3	1	ALIN2/MESIC GRAMINOID.			
3	2	BEOC2/COSE16		NOT MAPPED	
3	2	BEOC2/MESIC FORB			
3	3	ARTR4/PSSP6	1220-2285	ALL	LT60
3	3	ARTR4/FEID			
3	3	ARTRW8/POSE			
3	3	ARTRW8/PSSP6			
3	3	ARTRW8/STCO4			
3	3	ARTRT/PSSP6			
3	3	ARTRT/FEID			
3	3	ARTR2/STCO4			
3	4	PUTR2/STCO4	1677-2438	ALL	LT60
3	4	CELE3/PSSP6			
4	1	SAEX/EQAR		NOT MAPPED	
4	1	SAEX/MESIC FORB			
4	1	SAEX/MESIC GRAMINOID.			
4	1	SALU2/CARO6			
4	1	SALU2/CACA4			
4	1	COSE16/HELA4			
4	3	ARAR8/FEID	1220-1523	FLAT,SW	LT30
4	3	ARNO4/FEID			
4	4	ARNO4/PSSP6		NOT MAPPED	
4	4	ARAR8/POSE			
4	4	ARAR8/PSSP6			

M331D OVERTHRUST MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
		HERBACEOUS			
1	1	CAAQ		NOT MAPPED	
1	1	CASI2			
1	2	CAMI7	1829-2133	FLAT	FLAT
1	2	CARO6			
1	2	CANE2			
1	2	JUBA			
1	3	DECE		NOT MAPPED	
2	2	MECI3		NOT MAPPED	
2	3	MESIC FORB	2591-2743	FLAT	FLAT
2	4	POPA2		NOT MAPPED	
3	1	ELPA3		NOT MAPPED	
4	4	LECI4		NOT MAPPED	
4	4	PSSP6			
4	4	ORHY SERIES			

M331J WIND RIVER SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CALEH2		NOT MAPPED	
1	1	ABLA/CACA4			
1	2	ABLA-PIAL/VASC	2744-3200	ALL	LT60
1	2	PIAL/VASC			
1	3	ABLA/ARCO9	2439-3657	FLAT,SW	ALL
1	3	PICO/ARCO9			
1	3	ABLA/JUCO6			
1	4	PIAL/JUCO6	2744-3200	ALL	LT60
1	4	PIAL/CARO5			
1	4	PIAL/FEID			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	PICEA/CADI6			
2	1	ABLA/CACA4			
2	2	PIEN/VASC	2439-3657	NE,SW	5-59
2	2	ABLA/VASC			
2	2	ABLA/ARLA8			
2	2	PICO/VASC			
2	3	PICO/CARU	2286-2895	ALL	ALL
2	3	PICO/JUCO6			
2	4	PICO/CARO5		NOT MAPPED	
2	4	PSME/SPBE2			
2	4	PICO/FEID			
3	1	ABLA/STAM2		NOT MAPPED	
3	1	POPTRE/COSE16			
3	2	ABLA/ACRU2	2286-2438	NE	5-29
3	3	PICEA/PHMA5	2439-2743	FLAT,NE	LT60
3	3	PSME/SYAL			
3	3	PSME/MARE11			
3	3	PSME/CARU			
3	4	PSME/JUCO6		NOT MAPPED	
3	4	PSME/SYOR2			
3	4	PSME/ARCO9			
4	4	PIFL2/FEID	2134-2590	SW	5-29
4	4	PIFL2/FEKI2			
4	4	PSME/FEKI2			
4	4	PSME/FEID			
4	4	PIFL2/JUCO6			

M331J WIND RIVER SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	 ASPECT	 SLOPE
		SHRUBLANDS			
1	1	KRUMMHOLZ		NOT MAPPED	
1	1	SAPL2/CAAQ			
1	1	SAPL2/CASC12			
1	1	SARE2/CALE4			
1	1	PHEM/ANLA3			
1	1	KAMI/CASC12			
2	1	SABO2/CACA4	2286-2438	FLAT,SW	LT30
2	1	SABO2/EQAR			
2	1	SABO2/CAAQ			
2	1	SABO2/CANE2			
2	1	SADR			
2	2	ARTRV-SYOR2/FEID	3048-3200	FLAT	FLAT
2	3	ARTRV/FEID	2286-3047	FLAT,NE	LT30
3	1	SABE2		NOT MAPPED	
3	1	SALU2/CACA4			
3	1	SALU2/CARO6			
3	2	PUTR2/FEID		NOT MAPPED	
3	3	ARAR8/FEID	2286-2590	FLAT	FLAT
3	3	ARTR4/FEID			
4	4	ARTRT/PSSP6	1677-2133	ALL	LT60
4	4	ARTRW8/PSSP6			
4	4	ARTRV/PSSP6			
		HERBACEOUS			
1	2	FEID-CASC10		NOT MAPPED	
1	2	MOIST ALPINE			
1	3	DRY ALPINE	3201-3962	ALL	LT30
2	2	FEID-ELTR7		NOT MAPPED	
3	3	FEID-PSSP6	2134-2743	ALL	LT60
4	4	PSSP6-POSE		NOT MAPPED	
		ROCKS	2439-3962	ALL	FLAT,30-59,60+

M332A IDAHO BATHOLITH SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4	1372-1828	FLAT	FLAT
1	1	ABLA/CABI			
1	1	ABLA/LEGL			
1	2	ABLA/MEFE	1829-2895	ALL	LT60
1	2	LALY-ABLA			
1	2	ABLA/LUGLH			
1	3	ABLA/CARU	1220-3047	ALL	ALL
1	3	ABLA/CLUN2			
1	3	ABLA/COOC			
1	3	ABLA/LIBO3			
1	3	ABLA/VACE			
1	3	ABGR/XETE			
1	3	ABLA/VAGL			
1	3	ABLA/XETE			
1	4	ABLA/CAGE2	1372-3047	ALL	LT60
1	4	ABLA/SPBE2			
1	4	ABLA/ARCO9			
1	4	PIAL-ABLA			
1	4	PICO/FEID			
1	4	ABLA/VASC			
1	4	PICO/VASC			
2	1	ABLA/STAM2		NOT MAPPED	
2	2	THPL/ASCA2	610-1523	ALL	LT60
2	2	THPL/CLUN2			
2	2	THPL/GYDR			
2	2	THPL/TABR2/ASCA2			
2	3	ABGR/CLUN2	458-2590	ALL	LT60
2	3	ABGR/COOC			
2	3	ABGR/ASCA2			
2	3	ABGR/VACE			
2	3	ABGR/LIBO3			
2	3	ABGR/TABR2			
2	3	PSME/VACE			
2	4	ABLA/ACGL	915-2133	ALL	LT60
2	4	ABGR/ACGL			
2	4	ABGR/VAGL			
3	1	THPL/ATFI	458-1066	FLAT	FLAT
3	2	THPL/ADPE	305-1066	FLAT,NE	LT60
3	3	PSME/SYAL	1220-2438	ALL	LT60
3	3	ABGR/SPBE2			
3	3	PSME/ACGL			
3	3	PSME/LIBO3			
3	3	PSME/VAGL			
3	3	ABGR/CARU			
3	4	PSME/SPBE2	610-2743	ALL	ALL
3	4	PSME/CAGE2			
3	4	PSME/PHMA5			
3	4	PSME/MARE11			
3	4	PSME/CARU			
3	4	PSME/SYOR2			

M332A IDAHO BATHOLITH SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
3	4	PIPO/PHMA5			
3	4	PIPO/SYAL			
3	4	PIPO/SYOR2			
4	2	PIPO/CRDO2		NOT MAPPED	
4	2	POTR15/COSE16			
4	4	PSME/PSSP6	458-1981	ALL	ALL
4	4	PSME/FEID			
4	4	PIPO/FEID			
4	4	PIPO/PSSP6			
4	4	PIPO/PUTR2			
4	4	PIPO/STCO4			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	SAWO/CAAQ		NOT MAPPED	
1	1	SAWO/CARO6			
1	1	SAWO/SWPE-PEGR2			
1	1	SAPL2/CASC12			
1	1	SAPL2/CAAQ-CARO6			
1	1	SACO2/CASC12			
1	1	BEGL/CARO6			
2	1	SAEA/CAAQ		NOT MAPPED	
2	1	SAEA/CARO6			
2	1	SABO2/CACA4			
2	1	SAGE2/CACA4			
2	3	ARTRV-SYOR2/FEID	762-3047	ALL	ALL
2	3	ARTRV-SYOR2/PSSP6			
3	1	SABO2/CAAQ		NOT MAPPED	
3	1	SABO2/CARO6			
3	1	SAGE2/CARO6			
3	1	COSE16/HELA4			
3	1	ALIN2/COSE16			
3	1	ALIN2/RIHU			
3	1	COSE16			
4	1	BEOC2		NOT MAPPED	
4	4	PUTR2/FEID	458-1676	ALL	ALL
4	4	PUTR2/PSSP6			
4	4	CELE3/FEID			
4	4	CELE3/PSSP6			
4	4	ARTRV/PSSP6			
4	4	ARTRV/FEID			

HERBACEOUS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	3	GERO2	2286-3047	ALL	LT60
1	3	JUDR-CAREX SPP.			
1	3	ALPINE GRASSLAND			
2	1	CACA4	915-1828	FLAT,NE	LT30
2	1	CAAQ			
2	1	CABU6			
3	1	CANE2	1372-1523	FLAT	FLAT
3	1	JUBA			
3	1	ELPA3			

M332B BITTERROOT VALLEY SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/MEFE	1067-2285	FLAT,NE	LT60
1	3	LALY-ABLA			
1	3	ABLA/LUGLH			
1	3	ABLA/VASC	1982-2743	ALL	LT60
1	3	ABLA-PIAL/VASC			
1	4	PIAL SERIES	2439-2743	FLAT	LT30
1	4	PIAL-ABLA			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	1220-2133	FLAT,SW	LT60
2	2	ABLA/CLUN2			
2	2	PICEA/GATR3			
2	2	ABLA/GATR3			
2	2	PICEA/CLUN2			
2	3	ABLA/VACE	1524-2133	ALL	LT60
2	3	PSME/VAGL			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE		NOT MAPPED	
2	4	PICEA/VACE			
3	1	ABGR/SETR	1524-700	FLAT,NE	LT60
3	1	PICEA/COSE16			
3	2	ABGR/CLUN2	1067-1676	FLAT,NE	LT60
3	2	THPL/CLUN2			
3	2	ABGR/LIBO3			
3	3	PSME/CARU	915-2133	ALL	LT60
3	3	PSME/PHMA5			
3	3	PSME/LIBO3			
3	4	PSME/SPBE2	1067-2133	ALL	LT60
3	4	PSME/SYAL			
4	1	POTR15/COSE16	915-1523	FLAT	FLAT
4	1	PSME/COSE16			
4	1	PIPO/COSE16			
4	2	POTR15/SAEX		NOT MAPPED	
4	3	PIPO/SYAL	1220-1676	NE	5-29
4	4	PIPO/PSSP6	915-1828	ALL	LT60
4	4	PIPO/PUTR2			
4	4	PIPO/FEID			
4	4	PSME/FESC			
4	4	PSME/FEID			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	SAPL2/CASC12		NOT MAPPED	
1	1	SACA4/CARO6			
1	1	KAMI/CASC12			
2	1	SAGE2/CAAQ	1220-1371	FLAT	FLAT
2	1	SAGE2/CARO6			
2	1	SAWO/CAAQ			

M332B BITTERROOT VALLEY SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
2	1	SAGE2/CACA4			
2	1	BEGL/CARO6			
2	2	ALIN2		NOT MAPPED	
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CARO6		NOT MAPPED	
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL		NOT MAPPED	
3	2	COSE16			
3	3	PEFL15/DECE	1372–1676	ALL	LT30
3	3	PEFL15/FEID			
3	3	ARTR2FESC			
3	4	CELE3/PSSP6		NOT MAPPED	
4	4	ARTR2/PSSP6	915–1066	NE,SW	5–29
4	4	PUTR2/FEID			
4	4	ARTR2/FEID			
		HERBACEOUS			
1	1	CASI2		NOT MAPPED	
1	1	CASC12			
2	1	ELQU2		NOT MAPPED	
2	1	ELPA3			
2	1	SETR			
2	1	CALI7			
2	1	CACA4			
2	1	CAAQ			
2	1	CABU6			
2	1	CALA11			
2	2	DECE–CAREX SP.		NOT MAPPED	
2	2	DECE			
2	3	FEID–DECE		NOT MAPPED	
3	1	EQFL		NOT MAPPED	
3	1	GLBO			
3	1	CARO6			
3	2	POPA2		NOT MAPPED	
3	2	JUBA			
3	2	CANE2			
3	3	FEID–STRI2	1220–1371	NE,SW	5–29
3	3	FESC–FEID			
4	1	TYLA		NOT MAPPED	
4	1	PHAR3			
4	1	PHAU7			
4	1	SCAC			
4	4	FESC–PSSP6	915–1828	ALL	LT60
4	4	FEID–PSSP6			
4	4	PSSP6–POSE			
		ROCKS	1982–3200	ALL	ALL

M332C ROCKY MOUNTAIN FRONT SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4	2134-2285	FLAT	FLAT
1	1	PIEN/CACA4			
1	1	ABLA/LEGL			
1	2	ABLA/LUGLH	1829-2438	FLAT,NE	LT60
1	2	ABLA/MEFE			
1	2	LALY-ABLA			
1	3	ABLA/VASC	1982-2590	NE,SW	5-59
1	3	ABLA-PIAL/VASC			
1	3	ABLA/RIMO2			
1	4	ABLA/ARCO9	2134-2438	FLAT,SW	LT60
1	4	PIAL SERIES			
1	4	PIAL-ABLA			
1	4	ABLA-PIAL/ARUV			
2	1	PIEN/GATR3	1524-2133	FLAT	FLAT
2	1	ABLA/GATR3			
2	1	ABLA/STAM2			
2	1	POTR5/CACA4			
2	2	PICEA/MAST4	1524-1981	FLAT,NE	LT60
2	2	ABLA/ACRU2			
2	2	ABLA/LIBO3			
2	2	ABLA/CLUN2			
2	2	ABLA/ALVIS			
2	2	PIEN/LIBO3			
2	3	ABLA/CARU	1677-2285	NE,SW	5-59
2	3	PSME/VACE			
2	3	PIEN/VACE			
2	3	ABLA/VACE			
2	3	ABLA/VAGL			
2	3	ABLA/XETE			
2	4	PSME/ARCO9	1982-2133	SW	5-59
2	4	PICEA/SEST3			
2	4	PSME/SPBE2			
2	4	ABLA/CLCOC2			
3	1	PIEN/EQAR	1677-1981	FLAT	FLAT
3	1	PIEN/COSE16			
3	1	POTR5/COSE16			
3	2	PSME/PHMA5	1220-1828	FLAT,NE	LT60
3	2	PSME/LIBO3			
3	2	POTR5/OSOC			
3	3	PSME/CARU	1524-1828	FLAT,NE	LT60
3	3	PSME/SYAL			
3	4	PIFL2/JUCO6	1829-1981	SW	5-59
3	4	PSME/JUCO6			
3	4	PSME/ARUV			
4	1	POTR15/COSE16		NOT MAPPED	
4	1	PSME/COSE16			
4	1	JUSC/COSE16			
4	3	PSME/FESC		NOT MAPPED	
4	3	PSME/FEID			
4	4	PIFL2/PSSP6	1372-1981	ALL	LT60
4	4	PIFL2/FEID			

M332C ROCKY MOUNTAIN FRONT SECTION

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	SAPL2/CAAQ		NOT MAPPED	
1	1	SAPL2/CASC12			
1	1	SARE2/CALE4			
1	1	KAMI/CASC12			
1	2	SAAR16/POBI6	2439-2895	SW	5-59
1	2	PHEM/ANLA3			
1	3	DROC/CARU3	2439-2743	ALL	LT60
2	1	SACA4/CARO6		NOT MAPPED	
2	1	SAWO/CAAQ			
2	1	ALIN2			
2	2	ALVIS		NOT MAPPED	
2	2	PEFL15/DECE			
2	2	ARCA13/FEID			
2	2	SAWO/DECE			
2	3	PEFL15/FEID		NOT MAPPED	
2	4	ARTRV/PSSP6		NOT MAPPED	
3	1	SAGE2/CARO6		NOT MAPPED	
3	1	SAGE2/CACA4			
3	1	SALU2/CACA4			
3	1	BEOC2			
3	1	SADR			
3	1	SABE2			
3	2	PEFL15/FESC		NOT MAPPED	
3	2	ARCA13/PASM			
3	2	ROWO			
3	3	ARTR2/FESC		NOT MAPPED	
3	3	ARTRV/FEID			
4	1	SAEX		NOT MAPPED	
4	1	SALU2/CARO6			
4	1	COSE16			
4	2	PRVI		NOT MAPPED	
4	2	SYOC			
4	4	ARTRW8/PSSP6		NOT MAPPED	

HERBACEOUS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	CASC12		NOT MAPPED	
1	1	CASC12-CALE4			
1	2	DECE-CAREX		NOT MAPPED	
1	2	CANI2			
1	2	FEID-CASC10			
1	2	DECE-CALE4			
1	3	CASC10-PODI2		NOT MAPPED	
1	4	CARUD		NOT MAPPED	
1	4	GERO2			
3	3	FESC-PSSP6	1220-1828	ALL	LT60
3	3	FESC-FEID			
3	3	FEID-PSSP6			
4	2	SPPE		NOT MAPPED	
4	2	PASM			

TEMP COLD−1	MOIS WET−1	PLANT ASSOCIATIONS	VEGETATION−SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	3	PSSP6−PASM		NOT MAPPED	
4	4	PSSP6−BOGR2		NOT MAPPED	
4	4	PSSP6−POSE			
4	4	STCO4−BOGR2			
		ROCKS	1524−2590	NE,SW	60+

M332D BELT MOUNTAINS SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	1	ABLA/LEGL			
1	2	ABLA/ALVIS		NOT MAPPED	
1	2	ABLA/LUGLH			
1	2	ABLA/MEFE			
1	2	LALY-ABLA			
1	3	ABLA/VASC	1982-2895	ALL	LT60
1	3	ABLA-PIAL/VASC			
1	3	ABLA/RIMO2			
1	4	ABLA/ARCO9	2439-2743	ALL	LT60
1	4	PIAL SERIES			
1	4	PIAL-ABLA			
2	1	PIEN/GATR3		NOT MAPPED	
2	1	ABLA/GATR3			
2	1	PIEN/EQAR			
2	1	ABLA/STAM2			
2	1	POTR5/CACA4			
2	2	PICEA/MAST4	1677-2285	NE, FLAT	LT60
2	2	ABLA/ACRU2			
2	2	ABLA/LIBO3			
2	2	PIEN/LIBO3			
2	3	PSME/VACE	1677-2590	ALL	LT60
2	3	PSME/VAGL			
2	3	PICEA/VACE			
2	3	ABLA/VACE			
2	3	ABLA/VAGL			
2	3	ABLA/XETE			
2	3	ABLA/CARU			
2	4	PSME/ARCO9	1677-2438	ALL	LT60
2	4	PSME/SPBE2			
2	4	PICEA/SEST3			
2	4	ABLA//CLCOC2			
2	4	ABLA/CAGE2			
3	1	PSME/COSE16	1220-1676	FLAT	FLAT
3	1	PIEN/COSE16			
3	1	POTR15/COSE16			
3	1	POAN3/COSE16			
3	2	PIEN/PHMA5	1677-2438	ALL	LT60
3	2	PSME/LIBO3			
3	2	PSME/PHMA5			
3	3	PSME/CARU	1067-2438	ALL	LT60
3	3	PSME/SYAL			
3	3	PSME/SYOR2			
3	4	PSME/ARUV	1220-1371	ALL	LT60
3	4	PSME/JUCO6			
3	4	PIFL2/JUCO6			
4	1	PIPO/COSE16		NOT MAPPED	
4	1	JUSC/COSE16			
4	2	PIPO/PRVI		NOT MAPPED	

M332D BELT MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	3	PSME/FESC	1220-2438	ALL	LT30
4	3	PSME/FEID			
4	4	PIFL2/FEID	1372-2285	ALL	LT60
4	4	PIFL2/PSSP6			
4	4	PIPO/PSSP6			
4	4	PIPO/FEID			
4	4	PIPO/PUTR2			
4	4	PIFL2/CELE3			
4	4	JUSC/PSSP6			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	SAPL2/CAAQ		NOT MAPPED	
1	1	SAPL2/CASC12			
1	1	SARE2/CALE4			
1	1	KAMI/CASC12			
1	2	SAAR16/CALE4		NOT MAPPED	
1	2	SAAR16/POBI6			
1	3	DROC/CARU3	2439-3200	ALL	LT60
2	1	ALIN2		NOT MAPPED	
2	1	SAWO/CAAQ			
2	1	SACA4/CARO6			
2	2	PEFL15/DECE	1677-1981	FLAT,SW	LT30
2	2	ARCA13/FEID			
2	2	SAWO/DECE			
2	2	ALVIS			
2	3	PEFL15/FEID	1372-1676	NE,SW	5-29
2	3	PUTR2/FEID			
2	4	ARTRV/PSSP6	1524-1676	ALL	LT30
3	1	SAGE2/CARO6		NOT MAPPED	
3	1	SAGE2/CACA4			
3	1	SALU2/CACA4			
3	1	BEOC2			
3	1	SADR			
3	1	SABE2			
3	2	PEFL15/FESC		NOT MAPPED	
3	2	ARCA13/PASM			
3	2	ROWO			
3	3	ARAR8/FEID	1067-2133	ALL	LT60
3	3	ARTRV/FEID			
3	3	ARTR2FESC			
3	3	ARTR4/FEID			
3	4	PUTR2/PSSP6		NOT MAPPED	
3	4	CELE3/PSSP6			
4	1	SAEX		NOT MAPPED	
4	1	SALU2/CARO6			
4	1	COSE16			
4	2	SAVE4/LECI4		NOT MAPPED	
4	2	PRVI			
4	2	SYOC			
4	3	SAVE4/PASM		NOT MAPPED	

M332D BELT MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	4	ARNO4/PSSP6	1372-1676	ALL	LT30
4	4	ARAR8/PSSP6			
4	4	ARTRW8/PSSP6			
4	4	ARTRW8/STCO4			
		HERBACEOUS			
1	1	CASC12		NOT MAPPED	
1	1	CASC12-CALE4			
1	2	DECE-CAREX	2439-2590	FLAT	FLAT
1	2	CANI2			
1	2	DECE-CALE4			
1	3	CASC10/PODI2		NOT MAPPED	
1	3	CASC10-GERO2			
1	4	CAEL3		NOT MAPPED	
2	1	SETR		NOT MAPPED	
2	1	ELQU2			
2	1	CACA4			
2	1	CALI7			
2	1	CAAP3			
2	1	CAAQ			
2	1	CASI2			
2	2	FEID-DECE	2744-3047	NE	5-29
2	2	FEID-ELTR7			
2	3	FEID-CAFI	2591-3047	ALL	LT60
2	4	FEKI2		NOT MAPPED	
3	1	SCAC		NOT MAPPED	
3	1	ELPA3			
3	1	GLBO			
3	1	EQFL			
3	1	PHAR3			
3	1	CANE2			
3	1	CARO6			
3	2	FEID-STRI2	1829-2133	FLAT	FLAT
3	2	POPA2			
3	3	FESC-PSSP6	1067-2285	ALL	LT60
3	3	FESC-FEID			
3	3	FEID-PSSP6			
4	1	TYLA		NOT MAPPED	
4	1	SCMA			
4	1	SCPU3			
4	2	LECI4	1067-1219	NE	5-29
4	2	SPPE			
4	2	PASM			
4	3	PSSP6-PASM	915-1828	ALL	LT30
4	4	STCO4-BOGR2	915-1828	ALL	LT30
4	4	PSSP6-BOGR2			
4	4	PSSP6-POSE			
		ROCKS	2286-2590	FLAT	FLAT

M332E BEAVERHEAD MOUNTAINS SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	1	PIEN/EQAR		NOT MAPPED	
1	1	PIEN/CADI6			
1	1	ABLA/CACA4			
1	2	LALY–ABLA	2591–2743	NE	5–59
1	2	ABLA–PIAL/VASC			
1	2	ABLA/VASC			
1	3	PIAL/VASC	1829–3200	ALL	LT60
1	3	ABLA/RIMO2			
1	3	ABLA/ARCO9			
1	3	ABLA/VACE			
1	4	PIEN/HYRE70	2439–3352	ALL	LT60
1	4	PIAL–ABLA			
1	4	PIAL/FEID			
1	4	ABLA/CLCOC2			
1	4	PICO/FEID			
2	1	ABLA/STAM2		NOT MAPPED	
2	1	ABLA/MEFE			
2	2	PIEN/LIBO3	2286–2743	FLAT,NE	LT30
2	2	PIEN/GATR3			
2	2	ABLA/ACGL			
2	2	ABLA/LIBO3			
2	2	ABLA/THOC			
2	3	PSME/CAGE2	1982–2895	ALL	LT60
2	3	PSME/SPBE2			
2	3	ABLA/CARU			
2	3	ABLA/CAGE2			
2	3	PICEA/SEST3			
2	3	ABLA/SYAL			
2	4	PIFL2/JUCO6	1677–2895	ALL	LT60
2	4	PSME/JUCO6			
2	4	PSME/ARCO9			
3	1	POTR15/COSE16	1220–1523	FLAT	FLAT
3	2	PSME/ACGL	1372–1523	FLAT	FLAT
3	2	POTR5/SHCA			
3	2	POTR5/AMAL2–SYOR2/THFE			
3	2	POTR5/AMAL2–SYOR2/CARU			
3	2	POTR5/THFE			
3	3	PSME/CARU	1220–2743	ALL	LT60
3	3	PSME/MARE11			
3	3	PSME/PHMA5			
3	3	PSME/SYAL			
3	3	POTR5/CARU			
3	3	POTR5/SYOR2/CARU			
3	3	POTR5/SYOR2/THFE			
3	4	PIFL2/CELE3	1372–2743	ALL	ALL
3	4	PSME/CELE3			
3	4	PSME/SYOR2			
3	4	PIFL2/FEID			
3	4	PIFL2/FEKI2			
3	4	PIFL2/PSSP6			

M332E BEAVERHEAD MOUNTAINS SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
3	4	PSME/PSSP6			
3	4	PSME/FEID			
4	1	PIFL2/PEFL15/DIST3		NOT MAPPED	
4	2	POTR5/WYAM		NOT MAPPED	
4	3	POTR5/STCO4		NOT MAPPED	
4	4	JUOS/ARNO4	1220–2743	ALL	LT60
4	4	JUOS/ARTR2			
4	4	JUOS/STCO4			
4	4	JUOS/LEAM			
		SHRUBLANDS			
1	1	SACO2/CASC12	2591–2743	FLAT	FLAT
1	1	PHEM/ANLA3			
1	1	SARE2/CALE4			
1	1	SAAR16/CALE4			
1	1	SAPL2/CAAQ–CARO6			
1	1	SAPL2/CASC12			
1	2	DROC		NOT MAPPED	
1	2	SAAR16/POBI6			
1	4	ARART/FEID		NOT MAPPED	
2	1	SABO2/CACA4	2286–2590	FLAT	FLAT
2	1	SAEA/CAAQ			
2	1	SAEA/CARO6			
2	1	SAGE2/CARO6			
2	1	SAGE2/POPA2			
2	1	SAWO/CAAQ			
2	1	SAWO/CARO6			
2	1	SAWO/POPA2			
2	2	ARTR4/FEID	1067–3200	ALL	LT60
2	2	ARTRV/FEID			
2	2	ARTRV–SYOR2/FEID			
2	3	ARTRV–SYOR2/PSSP6	1067–2590	ALL	LT60
2	3	ARTR4/PSSP6			
2	3	ARTRV/PSSP6			
3	1	ALIN2/COSE16	1677–2438	FLAT	FLAT
3	1	COSE16/HELA4			
3	1	SABO2/CAAQ			
3	1	SABO2/CANE2			
3	1	SABO2/CARO6			
3	1	SABO2/EQAR			
3	1	SABO2/MESIC FORB			
3	3	CELE3/PSSP6	1524–2895	ALL	LT60
3	3	ARTRW8/LEAM			
3	3	ARTR2/FEID			
3	3	ARPE6/FEID			
3	4	ARNO4/FEID	1524–2590	ALL	LT60
3	4	ARAR8/PSSP6			
3	4	ARAR8/LEAM			
4	1	BEOC2		NOT MAPPED	
4	3	ATCO/LEAM		NOT MAPPED	

M332E BEAVERHEAD MOUNTAINS SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
4	4	SPAR2-ARFR4-POSE	1067-2285	ALL	LT60
4	4	SPAR2-ORSW			
4	4	ARNO4/POSE			
4	4	ARNO4/ORHY			
4	4	ARNO4/LEAM			
4	4	ARTRW8/PSSP6			
4	4	ATCO/ORHY			
4	4	ATCO/PSSP6			
		HERBACEOUS			
1	1	CACA4	2896-3047	FLAT	FLAT
1	1	CASC12			
1	2	FEID-PODI2	2744-3352	ALL	L60
1	2	FEID-CASC10			
1	2	JUDR-CAREX SPP.			
1	3	FEID-ERCA8	2744-3200	ALL	L60
1	3	CAPU			
1	3	GERO2			
1	4	CARUD	2744-2895	SW	5-59
1	4	CAEL3-LUAR3			
2	1	DECE		NOT MAPPED	
2	1	CAAQ			
2	1	CASI2			
2	1	DECE-CALE4			
2	2	FEID-DECE	2439-2590	SW	5-29
2	3	FEID-FEKI2	2591-2895	ALL	LT30
2	4	FEKI2	2896-3200	NE,SW	5-29
2	4	FEKI2-CAEL3			
2	4	FEKI2-PHPU5			
2	4	FEKI2-POCU3			
3	1	CANE2		NOT MAPPED	
3	1	ELPA3			
3	1	ELQU2			
3	1	JUBA			
3	3	FEID-PSSP6	1220-2438	NE,SW	5-29
3	3	FESC-FEID			
3	4	CAST40-POSE		NOT MAPPED	
4	4	LEAM-ENNU		NOT MAPPED	
		ROCKS	2591-3505	ALL	LT60

M332F CHALLIS VOLCANICS SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/RIMO2		NOT MAPPED	
1	3	ABLA/VASC	1829-3047	ALL	LT60
1	3	PIAL-ABLA			
1	4	PICO/FEID	1982-2895	ALL	LT60
1	4	ABLA/ARCO9			
2	1	ABLA/STAM2		NOT MAPPED	
2	1	PIEN/EQAR			
2	2	ABLA/LIBO3		NOT MAPPED	
2	2	ABLA/VACE			
2	3	ABLA/CAGE2	1982-3047	ALL	LT60
2	3	ABLA/CARU			
2	3	ABLA/SPBE2			
2	4	PSME/JUCO6		NOT MAPPED	
2	4	PSME/ARCO9			
3	1	POTR15/COSE16	2286-2743	NE,SW	5-59
3	2	PSME/ACGL		NOT MAPPED	
3	3	PSME/SYAL	1524-2590	FLAT,NE	LT60
3	3	PSME/CAGE2			
3	3	PSME/CARU			
3	4	PSME/SYOR2	1067-2895	ALL	ALL
3	4	PSME/MARE11			
4	4	PIFL2/CELE3	1524-2285	ALL	LT60
4	4	PSME/CELE3			
4	4	PSME/FEID			
4	4	PSME/PSSP6			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	SACO2/CASC12		NOT MAPPED	
1	1	SAPL2/CAAQ-CARO6			
1	1	SAPL2/CASC12			
1	1	SAWO/SWPE-PEGR2			
1	2	DROC	1524-1828	FLAT,NE	LT30
1	3	ARCA13/FEID		NOT MAPPED	
1	4	ARART/FEID		NOT MAPPED	
2	1	BEGL/CARO6		NOT MAPPED	
2	1	PEFL15/DECE			
2	1	SABO2/CACA4			
2	1	SAEA/CAAQ			
2	1	SAEA/CARO6			
2	1	SAGE2/CACA4			
2	1	SAGE2/CARO6			
2	1	SAWO/CAAQ			
2	1	SAWO/CARO6			
2	1	PEFL15/FEID			
2	2	ARTRV/FEID	1524-3047	ALL	LT60
2	2	ARTR4/FEID			
2	2	ARAR8/FEID			
2	2	ARTR4/PSSP6			
2	3	CELE3/HODU	1372-2895	ALL	LT60

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
2	3	ARTRV/PSSP6			
2	3	ARTRV-SYOR2/PSSP6			
3	1	ALIN2/COSE16		NOT MAPPED	
3	1	ALIN2/RIHU			
3	1	COSE16/HELA4			
3	1	SABO2/CAAQ			
3	1	SABO2/CARO6			
3	3	CELE3/PSSP6	1372-1828	FLAT	FLAT
4	1	BEOC2		NOT MAPPED	
4	3	ARTRW8/POSE		NOT MAPPED	
4	4	SPAR2-ARFR4-POSE	1220-2133	ALL	LT60
4	4	SPAR2-ORSW			
4	4	ARNO4/ORHY			
4	4	ARTRW8/PSSP6			
4	4	ARAR8/PSSP6			
4	4	ATCO/PSSP6			
4	4	ATCO/LEAM			

HERBACEOUS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CACA4		NOT MAPPED	
1	1	CASC12			
1	2	FEID-PODI2		NOT MAPPED	
1	2	CAPS2			
1	2	JUDR-CAREX SPP.			
1	3	FEID-ERCA8	2286-3505	ALL	LT60
1	3	IVGO-ERCA8			
1	3	IVGO-MIOB2			
1	3	CARUD			
1	3	GERO2			
1	4	CAEL3-LUAR3	2896-3505	ALL	LT60
2	1	DECE		NOT MAPPED	
2	1	CAAQ			
2	1	CASI2			
2	1	CABU6			
2	1	SCCE2-CALI			
2	1	DECE-CALE4			
2	1	AGEX-AGSC5			
2	2	FEID-DECE	1677-1828	FLAT	FLAT
2	3	FEID-FEKI2		NOT MAPPED	
2	4	FEKI2		NOT MAPPED	
2	4	FEKI2-CAEL3			
2	4	FEKI2-PHPU5			
2	4	FEKI2-POCU3			
3	1	CANE2		NOT MAPPED	
3	1	ELPA3			
3	1	ELQU2			
3	1	JUBA			
3	4	LEAM-LUAR3		NOT MAPPED	
3	4	CAST40-POSE			
4	1	SCAM2		NOT MAPPED	
4	4	LEAM-ENNU		NOT MAPPED	

M332G BLUE MOUNTAINS SECTION

TEMP COLD−1	MOIS WET−1	PLANT ASSOCIATIONS	VEGETATION−SITE RULES ELEVATION (m)	ASPECT	SLOPE
		FORESTS			
1	3	ABLA/MEFE	1677−1828	NE	5−29
1	4	ABLA/CAGE2	1677−2743	ALL	LT60
1	4	ABLA/VASC			
1	4	ABLA/PHEM			
1	4	PICO/VASC/CAPE6			
1	4	TSME/VASC			
1	4	TSME/VAME			
1	4	ABGR/VASC			
2	1	ABLA/STAM2		NOT MAPPED	
2	1	PIEN/CLUN2			
2	1	ABGR/TABR2			
2	1	PIEN/EQAR			
2	1	ABGR/SETR			
2	2	PICO−(POTR5)/SPDO/CAREX	1220−2285	FLAT,NE	LT60
2	3	ABLA/TRCA	915−2743	ALL	LT60
2	3	ABLA/CLUN2			
2	3	ABLA/LIBO3			
2	3	ABLA/THOC			
2	3	ABGR/ASCA2			
2	3	ABGR/TRCA			
2	3	ABGR/CLUN2			
2	3	ABGR/SYAL			
2	3	PICO/ELGL			
2	3	ABLA/RHAL2			
2	4	ABLA/CARU	1372−2590	ALL	LT60
2	4	ABLA/VAME			
2	4	ABLA/ARCO9			
2	4	ABGR/VAME			
2	4	ABGR/LIBO3			
2	4	ABGR/COOC2			
3	1	PIPO−POTR5/CAREX−(POA)	610−914	FLAT	FLAT
3	2	ABGR/ACGL	1372−2438	SW	5−59
3	3	PSME/PHMA5	915−1828	ALL	ALL
3	3	PSME/HODI			
3	3	PSME/SYOR2			
3	3	PSME/CELE3			
3	3	PIPO−PSME/PHMA5			
3	4	ABGR/SPBE2	762−2133	ALL	ALL
3	4	ABGR/CARU			
3	4	ABGR/CAGE2			
3	4	PICO/CARU			
3	4	PICO/FEID			
3	4	PICO/PUTR2/FEID			
3	4	PSME/CARU			
3	4	PSME/CAGE2			
3	4	PSME/VAGL			
3	4	PSME/SYAL			
3	4	PSME/SPBE2			
3	4	PSME/PSSP6			
3	4	PIPO−PSME/PUTR2			

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
3	4	PIPO/CARU			
3	4	PIPO/CAGE2			
3	4	PIPO/ELGL			
3	4	PIFL2/JUCO6			
4	3	PIPO/ARTRV/PONE2	610-1828	ALL	LT60
4	3	PIPO/PUTR2/FEID			
4	3	PIPO/CELE3			
4	3	PIPO/FEID			
4	3	JUOC-PIPO/ARTR2/PSSP6-(FEID-STIPA)			
4	3	JUOC/PSSP6			
4	3	JUOC/ARAR8/FEID			
4	3	JUOC/ARTR2-PUTR2/PSSP6-FEID			
4	3	JUOC/ARTRV			
4	4	PIPO/PUTR2/PSSP6	762-2133	ALL	LT60
4	4	PIPO/PSSP6			
4	4	JUOC/ARAR8/PSSP6			
4	4	JUOC/ARRI2/POSE			
4	4	JUOC/ARAR8/DAUN-POSE			
		SHRUBLANDS			
2	1	ALIN2-BEOC2/(SALIX)	1067-1523	FLAT	FLAT
3	2	BEOC2/CRDO2	610-1676	ALL	LT60
3	2	BEOC2/POTR15/SALIX			
3	2	ARCA13/(ELCA11)-PONE3			
3	2	ARCA13/LECI4			
3	3	CRDO2/SYAL	458-1981	ALL	ALL
3	3	CRDO2/ROWO			
3	3	PHMA5-SYAL			
3	3	SYAL-RONU			
3	3	ARTRV/FEID			
4	3	CELE3/PSSP6-FEID	610-2590	ALL	LT60
4	3	CELE3/CARU			
4	3	PUTR2/PSSP6-FEID			
4	3	ARTRV/LECI4			
4	3	ARTRV/CAGE2			
4	3	ARTRW8/LECI4			
4	3	ARTR2/FEID			
4	3	ARTRW8-PERA4/FEID			
4	3	ARAR8-PUTR2/PSSP6-FEID			
4	3	ARAR8/FEID			
4	3	ARTR4/FEID			
4	3	SAVE4/DISP			
4	3	SAVE4/LECI4			
4	4	CELE3/PSSP6	610-1981	ALL	LT60
4	4	PUTR2/PSSP6			
4	4	ARTR2/STCO4			
4	4	ARTRV/PSSP6			
4	4	ARTRW8/PSSP6			
4	4	ARTRW8/POSE			
4	4	ARTRW8-PUTR2/PSSP6			
4	4	ARTR4/PSSP6			

M332G BLUE MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES		
			ELEVATION (m)	ASPECT	SLOPE
4	4	ARAR8/PSSP6			
4	4	ARAR8/POSE			
4	4	CELE3/PSSP6			
4	4	ARRI2/PSSP6			
4	4	ARRI2/POSE			
4	4	ARTRW8-ATCO			
4	4	GLNE3/PSSP6			
4	4	RHGL/PSSP6			
		HERBACEOUS			
1	1	CALA11		NOT MAPPED	
1	1	CANI2			
1	1	CASC12			
1	1	CASP5			
1	3	FEID	2591-2895	ALL	LT60
1	3	FEOV			
2	2	DECE	1677-1981	FLAT	FLAT
2	3	CAHO5-FEVI	610-2743	ALL	LT60
2	3	FEVI-LUARL5			
2	3	PSSP6-FEID (PALOUSE)			
2	4	ELGL		NOT MAPPED	
2	4	PONE3			
3	3	FEID-CAHO5	458-1828	ALL	LT60
3	3	PSSP6-ERHE2			
3	3	FEID-KOMA			
3	3	FEID-SYAL			
3	3	RONU/FEID			
3	4	PSSP6-ARLO3-SPCR	153-1523	ALL	LT60
4	2	DECE-CAREX	915-1523	FLAT	FLAT
4	3	DISP-(SCNE)	762-1676	ALL	LT60
4	3	LECI4 (BOTTOMLANDS)			
4	3	PONE3-PULE-ELEL55			
4	4	PSSP6-POSE	153-1676	ALL	ALL
4	4	PSSP6-OPPO-(POSE)			
4	4	DAUN-POSE			
4	4	PSSP6-POSE (LITHOSOL)			
4	4	ARLO3-POSE			
4	4	ERST4-POSE			
4	4	ERMI4-PHOR2			
4	4	ERCO12-POSE			

M333A OKANOGAN HIGHLANDS SECTION

FORESTS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/MEFE	1524–2133	NE	5–59
1	2	ABLA/RHAL2			
1	2	TSME/MEFE			
1	2	TSHE/MEFE			
1	2	TSHE/RHAL2			
1	3	ABLA–PIAL/VASC	1372–2133	ALL	LT60
1	3	ABLA/VASC			
1	3	ABLA/XETE			
1	3	ABLA/LUGLH			
1	3	TSME/XETE			
1	3	TSME/LUGLH			
1	4	PIAL/CARU	1829–1981	SW	30–59
1	4	ABLA/CARU			
1	4	ABLA–PIAL/ARUV			
2	1	ABLA/TRCA		NOT MAPPED	
2	1	ABLA/STAM2			
2	1	ABLA/OPHO			
2	1	THPL/OPHO			
2	1	PIEN/EQAR			
2	2	TSME/CLUN2	610–2133	ALL	ALL
2	2	TSHE/CLUN2			
2	2	ABLA/CLUN2			
2	2	ABLA/LIBO3			
2	2	ABLA/COCA13			
2	2	TSHE/ARNU2			
2	2	TSHE/XETE			
2	2	TSHE/RUPE			
2	2	THPL/VAME			
2	2	THPL/LIBO3			
2	3	PSME/VACCI	762–1981	ALL	ALL
2	3	PSME/VACE			
2	3	ABGR/VACE			
2	3	ABLA/VACE			
2	3	ABGR/XETE			
2	4	PSME/CARU	1067–1676	FLAT,SW	LT60
2	4	PSME/SPBE2			
2	4	PSME/ARUV			
3	1	TSHE/GYDR	458–609	FLAT,SW	LT30
3	1	THPL/ARNU2			
3	1	THPL/GYDR			
3	1	THPL/ATFI			
3	2	ABGR/PHMA5	610–1371	ALL	LT60
3	2	ABGR/LIBO3			
3	2	ABGR/CLUN2			
3	2	ABGR/TABR2			
3	2	ABGR/PAMY			
3	2	THPL/CLUN2			
3	2	THPL/ASCA2			
3	2	PSME/LIBO3			

M333A OKANOGAN HIGHLANDS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
3	3	PSME/PHMA5	305-1523	ALL	ALL
3	3	PSME/PHMA5-LIBO3			
3	3	PSME/HODI			
3	3	PSME/SYAL			
3	4	PSME/CARU	305-1676	ALL	LT60
3	4	PIPO-PSME/PSSP6			
4	1	POTR5/COSE16	458-761	FLAT	FLAT
4	1	POTR15/COSE16			
4	1	ALIN2-POTR5/BEGL-RIBES/CAREX			
4	3	PIPO/FEID	305-914	ALL	ALL
4	3	PIPO/SYAL			
4	3	PIPO/PHMA5			
4	3	PSME/SYOR2			
4	3	PSME/FEID			
4	3	PIPO/FESC			
4	4	PIPO/PSSP6	153-1066	ALL	LT60
4	4	PIPO/PUTR2			
4	4	PIPO/PUTR2/FEID			
4	4	PIPO/PUTR2/ORHY			
4	4	PIPO/PUTR2/PSSP6			

SHRUBLANDS

1	1	BEGL/CARO6		NOT MAPPED	
1	2	CAME7-PHEM		NOT MAPPED	
2	1	ALVIS		NOT MAPPED	
2	4	ARTRV/PSSP6		NOT MAPPED	
3	1	ALIN2		NOT MAPPED	
3	1	COSE16			
3	1	SPDO			
3	3	PUTR2/FEID	153-1066	ALL	LT60
3	3	ARTR4/FESC			
3	3	ARTR4/FEID			
4	2	SAVE4		NOT MAPPED	
4	3	PUTR2/PSSP6	153-1371	ALL	LT60
4	3	PUTR2/STCO4			
4	3	ARTR4/STCO4			
4	3	ARTR4/PSSP6			
4	4	ARTR2/STCO4	153-304	SW	5-29
4	4	ARTRT/PSSP6			

TEMP COLD−1	MOIS WET−1	PLANT ASSOCIATIONS	VEGETATION−SITE RULES ELEVATION (m)	ASPECT	SLOPE
		HERBACEOUS			
1	1	CANI2		NOT MAPPED	
1	1	CAPS2			
1	2	FEVI	1982−2285	FLAT	FLAT
1	3	FEVI−FEID		NOT MAPPED	
2	1	CARO6		NOT MAPPED	
2	1	CAAQ			
2	1	CALA30			
2	1	CALA11			
2	1	CACA4			
2	3	FEID−FESC	458−609	SW	5−29
3	1	SCAC		NOT MAPPED	
3	1	NULUP			
3	2	JUBA		NOT MAPPED	
3	3	FEID−ERHE2	458−1371	SW	5−59

M333B FLATHEAD VALLEY SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	1	TSME/STAM2			
1	2	ABLA/LUGLH	1372-2285	ALL	LT60
1	2	TSME/MEFE			
1	2	ABLA/MEFE			
1	2	TSME/LUGLH			
1	2	TSHE/MEFE			
1	3	ABLA/VASC	1677-2133	ALL	ALL
1	3	LALY-ABLA			
1	3	ABLA-PIAL/VASC			
1	4	PIAL-ABLA	1982-2438	ALL	LT60
1	4	PIAL SERIES			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	ABLA/OPHO			
2	1	TSME/STAM2			
2	1	ABLA/STAM2			
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	458-1676	ALL	ALL
2	2	THPL/GYDR			
2	2	TSME/CLUN2			
2	2	ABLA/CLUN2			
2	2	TSHE/GYDR			
2	2	PICEA/GATR3			
2	2	PICEA/CLUN2			
2	3	TSME/XETE	1372-2285	ALL	ALL
2	3	ABLA/VACE			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	TSHE/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE		NOT MAPPED	
2	4	PICEA/VACE			
3	1	THPL/OPHO		NOT MAPPED	
3	1	ABGR/SETR			
3	1	PICEA/COSE16			
3	2	THPL/CLUN2	458-1523	ALL	ALL
3	2	THPL/ASCA2			
3	2	TSHE/CLUN2			
3	2	ABGR/LIBO3			
3	2	ABGR/CLUN2			
3	3	PSME/CARU	153-1523	ALL	LT30
3	3	PSME/PHMA5			
3	3	PSME/LIBO3			
3	3	PSME/SYAL			
3	3	ABGR/PHMA5			
3	3	PSME/VAGL			
3	4	PSME/ARUV	610-1219	ALL	LT60
4	1	POTR5/COSE16		NOT MAPPED	
4	1	POTR15/COSE16			
4	1	PICEA/LYAM3			

M333B FLATHEAD VALLEY SECTION

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
4	1	PSME/COSE16			
4	1	PIPO/COSE16			
4	2	POTR5/OSOC		NOT MAPPED	
4	3	PIPO/SYAL		NOT MAPPED	
4	4	PIPO/PSSP6	610-1371	ALL	LT60
4	4	PIPO/FEID			
4	4	PSME/FESC			
4	4	PSME/PSSP6			
4	4	PSME/FEID			

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	SAPL2/CASC12		NOT MAPPED	
1	1	SACA4/CARO6			
1	1	KAMI/CASC12			
1	2	PHEM/ANLA3		NOT MAPPED	
2	1	SAGE2/CAAQ		NOT MAPPED	
2	1	SAGE2/CACA4			
2	1	BEGL/CARO6			
2	2	SAWO/DECE		NOT MAPPED	
2	2	ALIN2			
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CARO6		NOT MAPPED	
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL		NOT MAPPED	
3	2	COSE16			
3	2	SAEX			
3	3	PEFL15/FESC		NOT MAPPED	
3	3	PEFL15/DECE			
3	3	ARTR2/FESC			
4	2	CRDO2		NOT MAPPED	
4	4	ARTR2/PSSP6		NOT MAPPED	
4	4	ARTR2/FEID			

M333B FLATHEAD VALLEY SECTION

HERBACEOUS

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CACA4		NOT MAPPED	
1	1	SETR			
1	1	CASI2			
1	1	CASC12			
1	2	ALPINE RNGLND		NOT MAPPED	
2	1	ELQU2		NOT MAPPED	
2	1	ELPA3			
2	1	CARO6			
2	1	CABU6			
2	1	CAAQ			
2	1	CALA11			
2	2	DECE–CAREX		NOT MAPPED	
2	2	DECE			
2	3	FEID–ELTR7		NOT MAPPED	
3	1	PHAU7		NOT MAPPED	
3	1	EQFL			
3	1	GLBO			
3	1	CAAP3			
3	2	POPA2		NOT MAPPED	
3	2	JUBA			
3	2	CANE2			
3	3	FEID–DECE		NOT MAPPED	
3	3	FEID–STRI2			
3	4	FESC–FEID		NOT MAPPED	
4	1	TYLA		NOT MAPPED	
4	1	SCAC			
4	3	FESC–PSSP6		NOT MAPPED	
4	3	FEID–PSSP6			
4	4	PSSP6–POSE	610–1066	ALL	LT60

M333C NORTHERN ROCKIES SECTION

FORESTS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	2	ABLA/MEFE	1220-2590	ALL	ALL
1	3	LALY-ABLA	1829-2285	FLAT,NE	ALL
1	3	ABLA/LUGLH			
1	4	ABLA/VASC	1982-2285	ALL	ALL
1	4	ABLA-PIAL/VASC			
1	4	PIAL-ABLA			
2	1	PICEA/EQAR		NOT MAPPED	
2	1	ABLA/OPHO			
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	610-1828	ALL	ALL
2	2	THPL/GYDR			
2	2	TSME/CLUN2			
2	2	ABLA/CLUN2			
2	2	PICEA/CLUN2			
2	3	ABLA/VACE	1220-2133	SW	GT5
2	3	PSME/LIBO3			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE	762-1219	ALL	LT30
2	4	PICEA/VACE			
3	1	THPL/OPHO		NOT MAPPED	
3	1	ABGR/SETR			
3	1	PICEA/COSE16			
3	2	THPL/CLUN2	1067-1523	ALL	LT60
3	2	THPL/ASCA2			
3	2	ABGR/LIBO3			
3	2	ABGR/CLUN2			
3	3	PSME/CARU	1067-1676	SW	5-59
3	3	PSME/PHMA5			
3	3	ABGR/PHMA5			
3	3	PSME/VAGL			
3	4	PSME/SYAL		NOT MAPPED	
4	1	POTR5/COSE16		NOT MAPPED	
4	1	POTR15/COSE16			
4	1	PICEA/LYAM3			
4	1	PSME/COSE16			
4	2	POTR5/OSOC		NOT MAPPED	

SHRUBLANDS

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
1	1	SAPL2/CASC12	NOT MAPPED		
1	1	SACA4/CARO6			
1	1	KAMI/CASC12			
1	2	PHEM/ANLA3	NOT MAPPED		
2	1	SAGE2/CAAQ	NOT MAPPED		
2	1	SAGE2/CACA4			
2	1	BEGL/CARO6			

M333C NORTHERN ROCKIES SECTION

TEMP	MOIS		VEGETATION–SITE RULES		
COLD–1	WET–1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
2	2	SAWO/DECE	NOT MAPPED		
2	2	ALIN2			
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CARO6	NOT MAPPED		
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL	NOT MAPPED		
3	2	COSE16			
3	2	SAEX			
3	3	PEFL15/FESC	NOT MAPPED		
3	3	PEFL15/DECE			
		HERBACEOUS			
1	1	CACA4	NOT MAPPED		
1	1	SETR			
1	1	CASI2			
1	1	CASC12			
1	2	ALPINE RANGELAND	2286–2743	ALL	LT60
2	1	ELQU2	NOT MAPPED		
2	1	ELPA3			
2	1	CARO6			
2	1	CABU6			
2	1	CAAQ			
2	1	CALA11			
2	2	DECE–CAREX	NOT MAPPED		
2	2	DECE			
2	3	FEID–ELTR7	NOT MAPPED		
3	1	PHAU7	NOT MAPPED		
3	1	EQFL			
3	1	GLBO			
3	1	CAAP3			
3	2	POPA2	NOT MAPPED		
3	2	JUBA			
3	2	CANE2			
3	3	FEID–DECE	NOT MAPPED		
3	3	FEID–STRI2			
3	4	FESC–FEID	NOT MAPPED		
4	1	TYLA	NOT MAPPED		
4	1	SCAC			
4	4	FESC–PSSP6	NOT MAPPED		
4	4	FEID–PSSP6			
		ROCKS	2286–2590	NE,SW	GT60

M333D BITTERROOT MOUNTAINS SECTION

FORESTS

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	ABLA/CACA4		NOT MAPPED	
1	1	TSME/STAM2			
1	2	ABLA/LUGLH	1524-2285	ALL	LT60
1	2	TSME/LUGLH			
1	2	TSME/MEFE			
1	2	ABLA/MEFE			
1	2	LALY-ABLA			
1	3	ABLA/VASC	1677-2438	ALL	LT60
1	3	ABLA-PIAL/VASC			
1	4	PIAL		NOT MAPPED	
1	4	PIAL-ABLA			
2	1	ABLA/GATR3	762-1371	NE,FLAT	LT30
2	1	PICEA/GATR3			
2	1	THPL/OPHO			
2	1	ABLA/OPHO			
2	1	THPL/ATFI			
2	2	ABLA/LIBO3	610-1676	ALL	LT60
2	2	THPL/GYDR			
2	2	ABLA/CLUN2			
2	2	TSHE/GYDR			
2	2	ABGR/TABR2			
2	2	TSME/CLUN2			
2	2	ABGR/CLUN2			
2	2	PICEA/CLUN2			
2	3	TSME/XETE	915-1981	ALL	LT60
2	3	ABLA/VACE			
2	3	PSME/LIBO3			
2	3	ABGR/XETE			
2	3	ABLA/XETE			
2	3	TSHE/XETE			
2	3	ABLA/VAGL			
2	4	PSME/VACE		NOT MAPPED	
2	4	PICEA/VACE			
3	1	ABGR/SETR		NOT MAPPED	
3	1	PICEA/COSE16			
3	2	THPL/ADPE	305-1676	ALL	LT60
3	2	TSHE/ASCA2			
3	2	TSHE/CLUN2			
3	2	ABGR/LIBO3			
3	2	ABGR/ASCA2			
3	3	PSME/CARU	458-1676	ALL	LT60
3	3	PSME/PHMA5			
3	3	ABGR/PHMA5			
3	3	ABGR/SPBE2			
3	3	PSME/SPBE2			
3	3	PSME/VAGL			
3	4	PSME/SYAL	305-914	NE,SW	5-59
4	1	POTR15/COSE16		NOT MAPPED	
4	1	PICEA/LYAM3			
4	1	PSME/COSE16			

M333D BITTERROOT MOUNTAINS SECTION

TEMP COLD-1	MOIS WET-1	PLANT ASSOCIATIONS	VEGETATION-SITE RULES ELEVATION (m)	ASPECT	SLOPE
4	1	PIPO/COSE16			
4	2	POTR15/CRDO	762-914	SW	5-29
4	4	PIPO/PSSP6	305-1066	SW	5-59
4	4	PIPO/FEID			
4	4	PIPO/SYAL			
4	4	PSME/PSSP6			
4	4	PSME/FEID			
		SHRUBLANDS			
1	1	SAPL2/CASC12		NOT MAPPED	
1	1	SACA4/CARO6			
1	1	KAMI/CASC12			
1	2	PHEM/ANLA3		NOT MAPPED	
2	1	SAGE2/CAAQ		NOT MAPPED	
2	1	SAGE2/CARO6			
2	1	SAWO/CAAQ			
2	1	SAGE2/CACA4			
2	1	BEGL/CARO6			
2	2	ALIN2		NOT MAPPED	
2	2	ALVIS			
2	2	SABE2			
3	1	SALU2/CARO6		NOT MAPPED	
3	1	SALU2/CACA4			
3	1	SADR			
3	2	SALUL		NOT MAPPED	
3	2	COSE16			
3	2	SAEX			
3	3	PUTR2/FESC	1067-1371	SW	LT30
3	3	ARTR4/FESC			
3	3	PEFL15/DECE			
3	3	ARTR2/FESC			
4	2	CRDO2		NOT MAPPED	
4	4	ARTR2/PSSP6		NOT MAPPED	
4	4	ARTR2/FEID			

M333D BITTERROOT MOUNTAINS SECTION

HERBACEOUS

TEMP	MOIS		VEGETATION-SITE RULES		
COLD-1	WET-1	PLANT ASSOCIATIONS	ELEVATION (m)	ASPECT	SLOPE
1	1	CASC12-CALE4		NOT MAPPED	
1	1	SETR			
1	1	CASI2			
1	1	CASC12			
1	2	DECE-CALE4		NOT MAPPED	
2	1	ELQU2		NOT MAPPED	
2	1	ELPA3			
2	1	CACA4			
2	1	CABU6			
2	1	CAAQ			
2	1	CALA11			
2	2	DECE-CAREX		NOT MAPPED	
2	2	DECE			
2	3	FESC-DECE		NOT MAPPED	
3	1	EQFL		NOT MAPPED	
3	1	GLBO			
3	1	CARO6			
3	2	POPA2		NOT MAPPED	
3	2	JUBA			
3	2	CANE2			
3	3	FEID-STRI2		NOT MAPPED	
3	4	FESC-FEID		NOT MAPPED	
4	1	TYLA		NOT MAPPED	
4	1	PHAU7			
4	1	SCAC			
4	3	FESC-PSSP6		NOT MAPPED	
4	3	FEID-PSSP6			
4	4	PSSP6-POSE		NOT MAPPED	

BLM LIBRARY
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APPENDIX 9. Frequency and relative percentage of main (305 m.) elevation belts by individual section: codes of section PV classes found in each elevation belt, number of section PV classes, number of plant associations by elevation belt, number of pixels intercepted by elevation belt, % representation of elevation belt of the section.

331A PALOUSE PRAIRIE SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	S34 H33 H43 H44	4	9	339	2.00
305-609	F31 F32 H22 H32 H23 H33 H43 H44	8	21	3575	21.06
610-914	F22 F32 S33 H22 H32 H23 H33 H34 H44	9	20	9121	53.72
915-1219	F31 F22 F32 F13 S33 H22 H32 H23 H33	9	23	3150	18.55
1220-1523	F12 F22 F13 H22 H23	5	13	742	4.37
1524-1828	F12 F22 F13 H22 H23 H33	6	16	52	0.31
TOTAL				16979	100.00

341E LAHONTAN BASIN SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	S42 S43 S44 H43	4	22	6515	19.12
1220-1523	S42 S33 S43 S34 S44	5	33	18841	55.30
1524-1828	S12 S22 S32 S42 S23 S33 S34	7	20	6178	18.13
1829-2133	F44 S12 S22 S32 S23 S33	6	16	1918	5.63
2134-2438	F13 F33 S12	3	5	516	1.51
2439-2743	F12 S12 S22 S13 S23	5	7	98	0.29
2744-3047	S12 S13	2	3	5	0.01
TOTAL				34071	100.00

342B-E NORTHWESTERN BASIN AND RANGE SECTION: EASTERN PORTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	F44 S32 S42 S33 S43 S34 S44	7	14	4864	12.26
1524-1828	F34 F44 S32 S33 S43 S34	6	14	15820	39.87
1829-2133	F23 F34 F44 S12 S22 S32 S13 S23 S33	9	26	14805	37.31
2134-2438	F12 F13 F23 F34 S12 S22 S13 S23 S14	9	36	3479	8.77
2439-2743	F12 F23 S12 S22 S13	5	25	595	1.50
2744-3047	F12 S12	2	11	117	0.29
3048-3352	F12	1	10	3	0.01
TOTAL				39683	100.00

342B-W NORTHWESTERN BASIN AND RANGE SECTION: WESTERN PORTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	F41	8	60	3093	4.18
	S22				
	S32				
	S42				
	S23				
	S33				
	S43				
	S44				
1220-1523	F23	16	98	37867	51.14
	F33				
	F34				
	F44				
	S41				
	S22				
	S32				
	S42				
	S13				
	S23				
	S33				
	S43				
	S24				
	S34				
	S44				
	H31				
1524-1828	F33	15	94	22923	30.96
	F43				
	F34				
	F44				
	S31				
	S22				
	S32				
	S42				
	S13				
	S23				
	S33				
	S43				
	S24				
	S34				
	S44				
1829-2133	F23	11	53	8667	11.71
	F33				
	F43				
	F34				
	F44				
	S31				
	S22				
	S32				
	S13				
	S23				
	S24				

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2134-2438	F31 F12 F13 F23 F33 F34 S12 S22 S13 S23 H12	11	46	1291	1.74
2439-2743	F12 F13 F23 F33 S12 S13 H12	7	22	189	0.26
2744-3047	F12 H12	2	4	10	0.01
TOTAL				74040	100.00

342C OWYHEE UPLANDS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
610-914	F31 F41 S23 S33 S43 S44 H43	7	27	10913	17.50
915-1219	S23 S33 S43 S34 S44	5	19	11803	18.93
1220-1523	S12 S22 S13 S23 S33 S43	6	29	17777	28.51
1524-1828	F43 F34 S12 S22 S13 S23 S33 S43 S44	9	44	19539	31.33
1829-2133	F23 S12 S22 S13 S23 S44	6	33	2192	3.52
2134-2438	F23 S12 S22 S13	4	23	132	0.21
TOTAL				62356	100.00

342D SNAKE RIVER BASALTS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
610-914	S23 S33	2	7	58	0.17
915-1219	S23 S33	2	7	2895	8.72
1220-1523	S12 S23 S33 S44	4	15	20448	61.60
1524-1828	S12 S22 S33 S44	4	14	8070	24.31
1829-2133	S12 S22 S32 S33	4	14	1668	5.03
2134-2438	S12 S22 S32	3	9	54	0.16
TOTAL				33193	100.00

342H HIGH LAVA PLAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
305-609	F21 S22 S33 S43 H41 H22 H33 H34	8	20	554	4.19
610-914	F34 F44 S22 S32 S33 S43 H41 H22 H33	9	26	3635	27.50
915-1219	F33 F34 F44 S11 S22 S32 S33 S43	8	23	6535	49.44
1220-1523	F21 F23 F33 F43 F34 S11 S22 S32 S42 S33 S43	11	26	2335	17.67
1524-1828	F13 F43 F34	3	5	156	1.18
1829-2133	F13	1	1	2	0.02
TOTAL				13217	100.00

342I COLUMBIA BASIN SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	S32	13	29	13099	20.28
	S23				
	S33				
	S43				
	S24				
	S34				
	S44				
	H11				
	H22				
	H32				
	H33				
	H43				
	H44				
305-609	F41	13	26	29981	46.42
	S31				
	S22				
	S32				
	S23				
	S33				
	S43				
	S24				
	S34				
	S44				
	H22				
	H32				
	H33				
610-914	F41	15	35	18457	28.58
	F22				
	F44				
	S22				
	S32				
	S23				
	S33				
	S43				
	S24				
	S34				
	H11				
	H22				
	H32				
	H33				
	H44				
915-1219	F22	13	31	2873	4.45
	F44				
	S22				
	S32				
	S23				
	S33				
	S24				
	S34				
	H11				
	H22				
	H32				
	H33				
	H44				

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	F22 F23 F44 S22 S44 H11	6	20	170	0.26
1524-1828	F22	1	3	1	0.00
TOTAL				64581	100.00

M242C EASTERN CASCADES SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	F32 F42 F43 S33 S43 S24	6	32	568	1.27
305-609	F21 F32 F42 F33 F43 F34 F44 S33 S43 S24	10	60	2109	4.70
610-914	F21 F22 F32 F42 F33 F43 F24 F34 F44 S23 S33 S43 S24 S34	14	95	5337	11.90
915-1219	F21 F22 F32 F42 F23 F33 F43 F24 F34 S33	10	102	7631	17.01

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	F21	19	133	12627	28.14
	F31				
	F12				
	F22				
	F32				
	F42				
	F13				
	F23				
	F33				
	F43				
	F14				
	F24				
	F34				
	F44				
	S33				
	S44				
	H11				
	H41				
	H23				
1524-1828	F31	15	114	11066	24.66
	F12				
	F22				
	F32				
	F42				
	F13				
	F23				
	F33				
	F14				
	F24				
	F34				
	F44				
	S33				
	H11				
	H21				
1829-2133	F11	15	100	4566	10.18
	F31				
	F12				
	F22				
	F32				
	F13				
	F23				
	F33				
	F14				
	F24				
	S12				
	S13				
	S14				
	H11				
	H13				

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2134-2438	F31 F13 F14 S12 S14 H11 H13 H14 ROCKS	9	28	933	2.08
2439-2743	F13 S14 H11 ROCKS	4	13	26	0.06
2744-3047	ROCKS	1	N/A	3	0.01
TOTAL				44866	100.00

M261D SOUTHERN CASCADES SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
305-609	F42 F43 F44 S43	4	17	662	3.27
610-914	F31 F32 F42 F43 S31 S43 S34 H44	8	27	2440	12.04
915-1219	F31 F22 F32 F42 F23 F33 F43 F44 S43	9	40	3920	19.34
1220-1523	F21 F31 F22 F32 F42 F23 F33 F43 F44	9	38	6293	31.05
1524-1828	F21 F12 F22 F32 F13 F23 F33	7	31	4226	20.85
1829-2133	F21 F12 F22 F32 F13 F23 F33	7	31	2212	10.91

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2134-2438	F12 F22 F13 F23 F14	5	20	413	2.04
2439-2743	F12 F14 ROCKS	3	8	56	0.28
2744-3047	ROCKS	1	N/A	19	0.09
3048-3352	ROCKS	1	N/A	13	0.06
3353-3657	ROCKS	1	N/A	9	0.04
3658-3962	ROCKS	1	N/A	4	0.02
3963-4267	ROCKS	1	N/A	1	0.00
TOTAL				20268	100.00

M261G MODOC PLATEAU SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	F43 F44 S41 H41	4	14	476	1.74
1220-1523	F32 F33 F43 F44 S22 S42 S33 S34 S44 H41 H43	11	38	12903	47.08
1524-1828	F32 F23 F33 F43 F44 S22 S42 S33	8	31	10357	37.79
1829-2133	F21 F22 F32 F23 F33 S22	6	21	3086	11.26
2134-2438	F21 F12 F22 F13 F23 S12 S14	7	20	511	1.86
2439-2743	F11 S14 H11	3	8	69	0.25
2744-3047	F14	1	3	4	0.01
TOTAL				27406	100.00

M331A YELLOWSTONE HIGHLANDS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	F33 S33 S44 H33 H44	5	11	408	1.15
1524-1828	F22 F13 F33 F43 F34 F44 S32 S23 S33 S44 H33 H43 H44	13	39	2849	8.04
1829-2133	F22 F13 F23 F33 F43 F24 F34 F44 S23 S33 H33 ROCKS	12	41	5927	16.72
2134-2438	F31 F22 F13 F23 F33 F43 F14 F24 F34 F44 S23 S33 S24 H33 ROCKS	15	49	8669	24.46

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2439-2743	F13 F23 F43 F14 F24 F34 S24 ROCKS	8	27	9104	25.69
2744-3047	F13 F23 F14 F24 H12 H13 H23 ROCKS	8	21	5455	15.39
3048-3352	F13 F14 H12 H13 ROCKS	5	11	2458	6.94
3353-3657	H13 ROCKS	2	1	568	1.60
3658-3962	H13	1	1	4	0.01
TOTAL				35442	100.00

M331D OVERTHRUST MOUNTAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	S33	2	10	1886	6.02
	S43				
1524-1828	F31	11	68	3462	11.05
	F22				
	F42				
	F34				
	F44				
	S21				
	S31				
	S13				
	S33				
	S24				
	S34				
1829-2133	F21	17	104	8410	26.83
	F22				
	F32				
	F42				
	F23				
	F33				
	F43				
	F34				
	F44				
	S21				
	S31				
	S13				
	S23				
	S33				
	S24				
	S34				
	H12				
2134-2438	F21	18	106	7442	23.74
	F22				
	F32				
	F42				
	F23				
	F33				
	F43				
	F14				
	F34				
	F44				
	S21				
	S31				
	S22				
	S13				
	S23				
	S33				
	S24				
	S34				

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2439-2743	F21 F12 F22 F32 F23 F33 F14 F34 S11 S21 S13 S23 S24 H23	14	80	6471	20.65
2744-3047	F12 F22 F32 F13 F23 F14 F34 S13 S23	9	58	3133	10.00
3048-3352	F32 F13 F23 F14	4	25	505	1.61
3353-3657	F13	1	5	34	0.11
3658-3962	F13	1	5	1	0.00
TOTAL				31344	100.00

M331J WIND RIVER SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1524-1828	S44	1	3	74	1.21
1829-2133	S44	1	3	298	4.88
2134-2438	F32 F23 F44 S21 S23 S33 H33	7	17	601	9.84
2439-2743	F22 F13 F23 F33 F44 S23 S33 H33 ROCKS	9	23	1203	19.70
2744-3047	F12 F22 F13 F23 F14 S23 ROCKS	7	15	1570	25.70
3048-3352	F12 F22 F13 F14 S22 H13 ROCKS	7	14	1471	24.08
3353-3657	F22 F13 H13 ROCKS	4	8	758	12.41
3658-3962	H13 ROCKS	2	1	133	2.18
TOTAL				6108	100.00

M333A OKANOGAN HIGHLANDS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	F44 S33 S43 S44	4	14	352	1.06
305-609	F31 F41 F33 F43 F34 F44 S33 S43 H23 H33	10	33	4715	14.18
610-914	F41 F22 F32 F23 F33 F43 F34 F44 S33 S43 H33	11	51	15338	46.12
915-1219	F22 F32 F23 F33 F24 F34 F44 S33 S43 H33	10	45	8051	24.21
1220-1523	F22 F32 F13 F23 F33 F24 F34 S43	8	42	3640	10.95

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1524-1828	F12 F22 F13 F23 F24 F34	6	31	1046	3.15
1829-2133	F12 F22 F13 F23 F14 H12	6	30	113	0.34
TOTAL				33255	100.00

M333B FLATHEAD VALLEY SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	F33	1	6	1	0.00
305-609	F22 F32 F33	3	18	276	1.12
610-914	F22 F32 F33 F34 F44 H44	6	25	4628	18.83
915-1219	F22 F32 F33 F34 F44 H44	6	25	8240	33.53
1220-1523	F12 F22 F32 F23 F33 F44	6	34	6935	28.22
1524-1828	F12 F22 F13 F23	4	21	3800	15.46
1829-2133	F12 F13 F23 F14	4	15	677	2.75
2134-2438	F12 F23 F14	3	12	15	0.06
TOTAL				24575	100.00

M333C NORTHERN ROCKIES SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
610-914	F22 F24	2	7	16	0.12
915-1219	F22 F32 F33 F24	4	15	1733	13.39
1220-1523	F12 F22 F32 F23 F33	5	19	3073	23.74
1524-1828	F12 F22 F23 F33	4	15	3717	28.72
1829-2133	F12 F13 F23 F14	4	11	3345	25.84
2134-2438	F12 F13 F14 H12 ROCKS	5	7	984	7.60
2439-2743	F12 H12 ROCKS	3	2	75	0.58
TOTAL				12944	100.00

M333D BITTERROOT MOUNTAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
305-609	F32 F33 F34 F44	4	17	120	0.43
610-914	F21 F22 F32 F42 F33 F34 F44	7	31	4567	16.41
915-1219	F21 F22 F32 F23 F33 F44	6	36	8897	31.97
1220-1523	F21 F22 F32 F23 F33	5	31	8019	28.81
1524-1828	F12 F22 F32 F13 F23 F33	6	33	4935	17.73
1829-2133	F12 F13 F23	3	14	1252	4.50
2134-2438	F12 F13	2	7	40	0.14
TOTAL				27830	100.00

M332A IDAHO BATHOLITH SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
305-609	F31	5	21	55	0.12
	F32				
	F23				
	F44				
	S44				
610-914	F31	8	36	1689	3.60
	F22				
	F32				
	F23				
	F34				
	F44				
	S23				
	S44				
915-1219	F31	10	42	5302	11.30
	F22				
	F32				
	F23				
	F24				
	F34				
	F44				
	S23				
	S44				
	H21				
1220-1523	F11	13	67	8663	18.47
	F22				
	F13				
	F23				
	F33				
	F14				
	F24				
	F34				
	F44				
	S23				
	S44				
	H21				
	H31				
1524-1828	F11	11	60	10525	22.44
	F13				
	F23				
	F33				
	F14				
	F24				
	F34				
	F44				
	S23				
	S44				
	H21				

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1829-2133	F12	9	51	10731	22.88
	F13				
	F23				
	F33				
	F14				
	F24				
	F34				
	F44				
	S23				
2134-2438	F12	9	45	7460	15.90
	F13				
	F23				
	F33				
	F14				
	F34				
	S23				
	H13				
	ROCKS				
2439-2743	F12	8	39	2209	4.71
	F13				
	F23				
	F14				
	F34				
	S23				
	H13				
	ROCKS				
2744-3047	F12	6	23	271	0.58
	F12				
	F13				
	F14				
	S23				
	H13				
	ROCKS				
TOTAL				46905	100.00

M332B BITTERROOT VALLEY SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	F41 F12 F32 F33 F34 F44 S44 H44	8	23	1855	8.93
1220-1523	F41 F12 F22 F32 F33 F43 F34 F44 S21 S33 H33 H44	12	36	4333	20.86
1524-1828	F31 F12 F22 F32 F23 F33 F43 F34 F44 S33 H44	11	33	5724	27.56
1829-2133	F31 F12 F22 F13 F23 F33 F34 ROCKS	8	22	5362	25.82
2134-2438	F12 F13 F23 ROCKS	4	10	2893	13.93
2439-2743	F13 F14 ROCKS	3	6	562	2.71
2744-3047	ROCKS	1	N/A	39	0.19
3048-3352	ROCKS	1	N/A	1	0.00
TOTAL				20769	100.00

M332C ROCKY MOUNTAIN FRONT SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1220-1523	F32 F44 H33	3	8	462	7.98
1524-1828	F21 F31 F22 F32 F23 F33 F44 H33 ROCKS	9	29	2054	35.47
1829-2133	F21 F31 F12 F22 F13 F23 F24 F34 F44 ROCKS	10	34	2078	35.88
2134-2438	F11 F12 F13 F23 F14 ROCKS	6	19	1131	19.53
2439-2743	F13 S12 S13 ROCKS	4	6	65	1.12
2744-3047	S12	1	2	1	0.02
TOTAL				5791	100.00

M332D BELT MOUNTAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	F33 S33 H42 H33 H43 H44	6	17	2703	7.22
1220-1523	F31 F33 F43 F34 F44 S23 S33 S44 H33 H43 H44	11	36	12443	33.24
1524-1828	F31 F22 F32 F23 F33 F43 F24 F34 F44 S22 S23 S33 S24 S44 H33 H43 H44	17	60	12976	34.67
1829-2133	F22 F22 F32 F13 F23 F33 F24 F34 F44 S22 S33 H32 H33	12	49	6372	17.02

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2134-2438	F22 F22 F32 F13 F23 F33 F43 F24 F44 H33 ROCKS	10	37	2464	6.58
2439-2743	F13 F23 F14 S13 H12 H23 ROCKS	7	18	377	1.01
2744-3047	F13 S13 H22 H23	4	7	93	0.25
3048-3352	S13	1	1	2	0.01
TOTAL				37430	100.00

M332E BEAVERHEAD MOUNTAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	S22 S23 S44	3	14	49	0.11
1220-1523	F31 F32 F33 F34 F44 S22 S23 S44 H33	9	41	1901	4.40
1524-1828	F33 F24 F34 F44 S31 S22 S23 S33 S34 S44	10	50	8005	18.53
1829-2133	F13 F23 F33 F24 F34 F44 S31 S22 S23 S33 S34 S44	12	60	13984	32.37
2134-2438	F22 F13 F23 F33 F24 F34 F44 S21 S31 S22 S23 S33 S34 S44 H33	15	75	11342	26.25

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2439-2743	F12	18	75	5840	13.52
	F22				
	F13				
	F23				
	F33				
	F14				
	F24				
	F34				
	F44				
	S11				
	S21				
	S22				
	S23				
	S33				
	S34				
	H22				
	H23				
	ROCKS				
2744-3047	F13	13	40	1841	4.26
	F23				
	F14				
	F24				
	S22				
	S33				
	H11				
	H12				
	H13				
	H23				
	H14				
	H24				
	ROCKS				
3048-3352	F13	7	22	223	0.52
	F14				
	S22				
	H12				
	H13				
	H24				
	ROCKS				
3353-3657	ROCKS	1	N/A	17	0.04
TOTAL				43202	100.00

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
2744-3047	F13 F23 F14 F34 S22 S23 H13 H14	8	22	1052	7.33
3048-3352	H13 H14	2	6	213	1.48
3353-3657	H13 H14	2	6	6	0.04
TOTAL				14361	100.00

M332G BLUE MOUNTAINS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
0-304	H34 H44	2	9	16	0.03
305-609	S33 H33 H34 H44	4	19	670	1.28
610-914	F31 F43 F34 F44 S32 S33 S43 S44 H23 H33 H43 H34 H44	13	90	3692	7.06
915-1219	F23 F33 F43 F34 F44 S21 S32 S33 S43 S44 H42 H23 H33 H43 H34 H44	16	106	11935	22.82
1220-1523	F22 F32 F23 F33 F43 F24 F34 F44 S21 S32 S33 S43 S44 H42 H23 H33 H34 H44	18	111	20361	38.93

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
1524-1828	F22	18	115	12134	23.20
	F32				
	F13				
	F23				
	F33				
	F43				
	F14				
	F24				
	F34				
	S32				
	S33				
	S43				
	S44				
	H22				
	H23				
	H33				
	H43				
	H44				
1829-2133	F22	11	84	2306	4.41
	F23				
	F14				
	F24				
	F34				
	F44				
	S33				
	S43				
	S44				
	H22				
	H23				
2134-2438	F22	7	41	990	1.89
	F32				
	F23				
	F14				
	F24				
	S43				
	H23				
2439-2743	F23	6	41	195	0.37
	F14				
	F24				
	S43				
	H13				
	H23				
2744-3047	H13	1	2	7	0.01
TOTAL				52306	100.00

M332F CHALLIS VOLCANICS SECTION

ELEVATION BELT (m)	SECTION PV CLASSES	# OF SECTION CLASSES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
915-1219	F34	1	2	2	0.01
1220-1523	F34 S23 S33 S44	4	13	239	1.66
1524-1828	F33 F34 F44 S12 S22 S23 S33 S44 H22	9	26	1666	11.60
1829-2133	F13 F23 F33 F14 F34 F44 S22 S23 S44	9	30	3547	24.70
2134-2438	F31 F13 F23 F33 F14 F34 F44 S22 S23 H13	10	29	4501	31.34
2439-2743	F31 F13 F23 F33 F14 F34 S22	7	17	3135	21.83

M332D BELT MOUNTAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	4	168	0.45
F22	4	1592	4.25
F32	3	366	0.98
F13	3	1802	4.81
F23	7	1581	4.22
F33	3	6402	17.10
F43	2	1200	3.21
F14	3	119	0.32
F24	5	1243	3.32
F34	3	704	1.88
F44	7	1760	4.70
S22	4	28	0.07
S13	1	23	0.06
S23	2	109	0.29
S33	4	2657	7.10
S24	1	1117	2.98
S44	4	431	1.15
H12	3	1	0.00
H22	2	43	0.11
H32	2	23	0.06
H42	3	6	0.02
H23	1	80	0.21
H33	3	8317	22.22
H43	1	3218	8.60
H44	3	4437	11.85
ROCKS	N/A	3	0.01
TOTAL	78	37430	100.00

M332E BEAVERHEAD MOUNTAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	1	413	0.96
F12	3	26	0.06
F22	5	67	0.16
F32	5	91	0.21
F13	4	5937	13.74
F23	6	2732	6.32
F33	7	3458	8.00
F14	5	792	1.83
F24	3	1415	3.28
F34	8	397	0.92
F44	4	996	2.31
S11	6	15	0.03
S21	8	135	0.31
S31	7	1327	3.07
S22	3	16019	37.08
S23	3	2708	6.27
S33	4	737	1.71
S34	3	1768	4.09
S44	8	3273	7.58
H11	2	2	0.00
H12	3	219	0.51
H22	1	2	0.00
H13	3	157	0.36
H23	1	50	0.12
H33	2	46	0.11
H14	2	10	0.02
H24	4	16	0.04
ROCKS	N/A	394	0.91
TOTAL	111	43202	100.00

M332F CHALLIS VOLCANICS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	1	2	0.01
F13	2	3870	26.95
F23	3	1540	10.72
F33	3	520	3.62
F14	2	417	2.90
F34	2	1632	11.36
F44	4	358	2.49
S12	1	5	0.03
S22	4	2249	15.66
S23	3	1876	13.06
S33	1	16	0.11
S44	7	1436	10.00
H22	1	4	0.03
H13	5	343	2.39
H14	1	93	0.65
TOTAL	40	14361	100.00

M332G BLUE MOUNTAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	1	17	0.03
F22	1	234	0.45
F32	1	360	0.69
F13	1	1	0.00
F23	10	3076	5.88
F33	5	2395	4.58
F43	9	3942	7.54
F14	7	1405	2.69
F24	6	2963	5.66
F34	17	18657	35.67
F44	5	150	0.29
S21	1	404	0.77
S32	4	2010	3.84
S33	5	1199	2.29
S43	13	7374	14.10
S44	16	1179	2.25
H22	1	44	0.08
H42	1	203	0.39
H13	2	32	0.06
H23	3	1493	2.85
H33	5	2068	3.95
H43	3	42	0.08
H34	1	646	1.24
H44	8	2412	4.61
TOTAL	126	52306	100.00

M333A OKANOGAN HIGHLANDS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	4	21	0.06
F41	3	839	2.52
F12	5	244	0.73
F22	10	5846	17.58
F32	8	4162	12.52
F13	6	171	0.51
F23	5	1532	4.61
F33	4	8816	26.51
F43	6	2185	6.57
F14	3	1	0.00
F24	3	420	1.26
F34	2	2062	6.20
F44	5	487	1.46
S33	3	2342	7.04
S43	4	3940	11.85
S44	2	44	0.13
H12	1	1	0.00
H23	1	23	0.07
H33	1	119	0.36
TOTAL	76	33255	100.00

M333B FLATHEAD VALLEY SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	5	2043	8.31
F22	7	4010	16.32
F32	5	7063	28.74
F13	3	304	1.24
F23	6	1456	5.92
F33	6	3848	15.66
F14	1	29	0.12
F34	1	1154	4.70
F44	5	1141	4.64
H44	1	3527	14.35
TOTAL	40	24575	100.00

M333C NORTHERN ROCKIES SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	1	2718	21.00
F22	3	1429	11.04
F32	4	626	4.84
F13	2	1609	12.43
F23	5	3611	27.90
F33	4	612	4.73
F14	3	928	7.17
F24	2	1084	8.37
H12	1	323	2.50
ROCKS	N/A	4	0.03
TOTAL	25	12944	100.00

M333D BITTERROOT MOUNTAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F21	5	878	3.15
F12	5	1917	6.89
F22	8	3143	11.29
F32	5	9548	34.31
F42	1	515	1.85
F13	2	266	0.96
F23	7	4008	14.40
F33	6	6981	25.08
F34	1	360	1.29
F44	5	214	0.77
TOTAL	45	27830	100.00

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APPENDIX 10. Frequency and relative percentage of PV vegetation classes by individual section: number of plant associations per class, number of pixels intercepted by each class, % representation of the section.

331A PALOUSE PRAIRIE SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	5	6	0.04
F12	3	40	0.24
F22	3	425	2.50
F32	2	394	2.32
F13	1	193	1.14
S33	2	44	0.26
S34	2	59	0.35
H22	2	623	3.67
H32	1	1782	10.50
H23	4	9795	57.69
H33	3	2994	17.63
H43	2	61	0.36
H34	1	2	0.01
H44	2	561	3.30
TOTAL	34	16979	100.00

341E LAHONTAN BASIN SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	1	7	0.02
F13	1	27	0.08
F33	3	274	0.80
F44	4	18	0.05
S12	1	226	0.66
S22	2	354	1.04
S32	1	138	0.41
S42	1	20316	59.63
S13	2	38	0.11
S23	1	3321	9.75
S33	7	2407	7.06
S43	7	482	1.41
S34	7	3713	10.90
S44	11	2214	6.50
H43	3	536	1.57
TOTAL	52	34071	100.00

342B-E NORTHWESTERN BASIN AND RANGE SECTION: EASTERN PORTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	10	262	0.66
F13	3	2	0.01
F23	8	743	1.87
F34	5	960	2.42
F44	2	2353	5.93
S12	1	752	1.90
S22	3	396	1.00
S32	1	8275	20.85
S42	2	377	0.95
S13	3	535	1.35
S23	2	4440	11.19
S33	1	16944	42.70
S43	4	165	0.42
S14	1	4	0.01
S34	1	1036	2.61
S44	3	2439	6.15
TOTAL	50	39683	100.00

342B-W NORTHWESTERN BASIN AND RANGE SECTION: WESTERN PORTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	2	29	0.04
F41	2	38	0.05
F12	1	31	0.04
F13	1	20	0.03
F23	4	201	0.27
F33	4	835	1.13
F43	1	8	0.01
F34	4	242	0.33
F44	5	110	0.15
S31	4	96	0.13
S41	2	2411	3.26
S12	3	114	0.15
S22	9	1685	2.28
S32	4	3847	5.20
S42	3	9331	12.60
S13	6	676	0.91
S23	9	45414	61.34
S33	10	274	0.37
S43	10	5766	7.79
S24	3	744	1.00
S34	9	944	1.27
S44	13	859	1.16
H31	3	332	0.45
H12	3	33	0.04
TOTAL	115	74040	100.00

342C OWYHEE UPLANDS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	1	2	0.00
F41	7	8	0.01
F23	8	513	0.82
F43	3	2667	4.28
F34	8	2	0.00
S12	6	3125	5.01
S22	4	2634	4.22
S13	5	14858	23.83
S23	6	18539	29.73
S33	4	12238	19.63
S43	4	2306	3.70
S34	1	602	0.97
S44	4	4860	7.79
H43	1	2	0.00
TOTAL	62	62356	100.00

342D SNAKE RIVER BASALTS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
S12	3	1365	4.11
S22	1	13	0.04
S32	5	359	1.08
S23	2	21	0.06
S33	5	29467	88.77
S44	5	1968	5.93
TOTAL	21	33193	100.00

342H HIGH LAVA PLAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F21	4	62	0.47
F13	1	149	1.13
F23	1	257	1.94
F33	1	6	0.05
F43	1	16	0.12
F34	3	3597	27.21
F44	4	291	2.20
S11	2	1195	9.04
S22	2	1948	14.74
S32	5	2328	17.61
S42	1	1	0.01
S33	3	2612	19.76
S43	3	458	3.47
H41	2	96	0.73
H22	1	20	0.15
H33	3	175	1.32
H34	2	6	0.05
TOTAL	39	13217	100.00

342I COLUMBIA BASIN SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F41	1	1644	2.55
F22	3	276	0.43
F23	1	2	0.00
F44	5	854	1.32
S31	1	384	0.59
S22	3	8923	13.82
S32	1	11641	18.03
S23	2	245	0.38
S33	3	14294	22.13
S43	3	1204	1.86
S24	2	1201	1.86
S34	2	7746	11.99
S44	5	701	1.09
H11	3	1009	1.56
H22	1	4359	6.75
H32	1	8033	12.44
H33	1	1250	1.94
H43	1	17	0.03
H44	4	798	1.24
TOTAL	43	64581	100.00

M242C EASTERN CASCADES SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F11	2	34	0.08
F21	7	1300	2.90
F31	3	560	1.25
F12	3	2631	5.86
F22	14	1583	3.53
F32	11	6733	15.01
F42	7	2444	5.45
F13	9	2478	5.52
F23	14	4603	10.26
F33	11	7133	15.90
F43	8	285	0.64
F14	5	1931	4.30
F24	18	7907	17.62
F34	9	2789	6.22
F44	1	504	1.12
S12	2	69	0.15
S13	1	1	0.00
S23	2	1	0.00
S33	3	365	0.81
S43	2	659	1.47
S14	2	169	0.38
S24	1	23	0.05
S34	1	92	0.21
S44	4	267	0.60
H11	2	29	0.06
H21	4	110	0.25
H41	2	108	0.24
H13	3	8	0.02
H23	2	8	0.02
H14	2	6	0.01
ROCKS	N/A	36	0.08
TOTAL	155	44866	100.00

M261D SOUTHERN CASCADES SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F21	2	398	1.96
F31	2	444	2.19
F12	6	160	0.79
F22	5	1592	7.85
F32	8	4775	23.56
F42	5	842	4.15
F13	2	1014	5.00
F23	5	1858	9.17
F33	3	2225	10.98
F43	4	3087	15.23
F14	2	41	0.20
F44	4	2809	13.86
S31	1	35	0.17
S43	4	245	1.21
S34	2	680	3.36
H44	1	6	0.03
ROCKS	N/A	57	0.28
TOTAL	56	20268	100.00

M261G MODOC PLATEAU SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F11	3	4	0.01
F21	1	166	0.61
F12	4	10	0.04
F22	4	2313	8.44
F32	4	626	2.28
F13	5	149	0.54
F23	2	2499	9.12
F33	7	4368	15.94
F43	6	3784	13.81
F14	3	4	0.01
F44	4	7163	26.14
S41	1	319	1.16
S12	2	1	0.00
S22	3	5	0.02
S42	3	1765	6.44
S33	2	1603	5.85
S14	2	75	0.27
S34	4	180	0.66
S44	1	114	0.42
H11	2	6	0.02
H41	3	2251	8.21
H43	1	1	0.00
TOTAL	67	27406	100.00

M331A YELLOWSTONE HIGHLANDS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	2	1213	3.42
F22	5	779	2.20
F13	3	10289	29.03
F23	4	2322	6.55
F33	2	2983	8.42
F43	4	456	1.29
F14	6	2696	7.61
F24	4	2984	8.42
F34	4	3121	8.81
F44	5	255	0.72
S32	1	1	0.00
S23	3	1455	4.11
S33	4	1192	3.36
S24	2	240	0.68
S44	1	68	0.19
H12	1	1062	3.00
H13	1	2310	6.52
H23	2	1	0.00
H33	1	844	2.38
H43	1	5	0.01
H44	3	490	1.38
ROCKS	N/A	676	1.91
TOTAL	59	35442	100.00

M331D OVERTHRUST MOUNTAINS SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F21	3	121	0.39
F31	1	15	0.05
F12	4	473	1.51
F22	15	1286	4.10
F32	8	1169	3.73
F42	2	868	2.77
F13	5	776	2.48
F23	9	6218	19.84
F33	7	2796	8.92
F43	3	87	0.28
F14	3	975	3.11
F34	9	2346	7.48
F44	6	865	2.76
S11	6	51	0.16
S21	8	415	1.32
S31	13	295	0.94
S22	3	19	0.06
S13	2	1580	5.04
S23	3	2451	7.82
S33	8	5874	18.74
S43	2	131	0.42
S24	2	1504	4.80
S34	2	618	1.97
H12	4	410	1.31
H23	1	1	0.00
TOTAL	129	31344	100.00

M331J WIND RIVER SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F12	2	725	11.87
F22	4	584	9.56
F32	1	3	0.05
F13	3	766	12.54
F23	2	438	7.17
F33	4	397	6.50
F14	3	451	7.38
F44	5	83	1.36
S21	5	17	0.28
S22	1	1	0.02
S23	1	124	2.03
S33	2	195	3.19
S44	3	372	6.09
H13	1	1196	19.58
H33	1	586	9.59
ROCKS	N/A	170	2.78
TOTAL	38	6108	100.00

M332A IDAHO BATHOLITH SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F11	3	10	0.02
F31	1	38	0.08
F12	3	1200	2.56
F22	4	1757	3.75
F32	1	358	0.76
F13	8	9461	20.17
F23	7	3460	7.38
F33	6	1612	3.44
F14	7	5708	12.17
F24	3	2150	4.58
F34	9	9045	19.28
F44	6	2781	5.93
S23	2	2348	5.01
S44	6	6765	14.42
H21	3	24	0.05
H31	3	4	0.01
H13	3	177	0.38
ROCKS	N/A	7	0.01
TOTAL	75	46905	100.00

M332B BITTERROOT VALLEY SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F31	2	716	3.45
F41	3	520	2.50
F12	1	3697	17.80
F22	5	1006	4.84
F32	3	331	1.59
F13	4	2332	11.23
F23	5	1638	7.89
F33	3	3527	16.98
F43	1	14	0.07
F14	2	62	0.30
F34	2	1787	8.60
F44	5	1558	7.50
S21	5	75	0.36
S33	3	621	2.99
S44	3	10	0.05
H33	2	11	0.05
H44	3	1914	9.22
ROCKS	N/A	950	4.57
TOTAL	52	20769	100.00

M332C ROCKY MOUNTAIN FRONT SECTION

PV CLASS CODES	# OF PLANT ASSOCIATIONS	# OF PIXELS	% OF SECTION
F11	3	9	0.16
F21	4	153	2.64
F31	3	53	0.92
F12	3	728	12.57
F22	6	578	9.98
F32	3	367	6.34
F13	3	630	10.88
F23	6	1167	20.15
F33	2	385	6.65
F14	4	345	5.96
F24	4	232	4.01
F34	3	239	4.13
F44	2	458	7.91
S12	2	30	0.52
S13	1	34	0.59
H33	3	352	6.08
ROCKS	N/A	32	0.54
TOTAL	52	5791	100.00